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# COAST GUARD SHIPBUILDING STANDARDS

Coast Guard Shipbuilding Standards, ... NG

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SUBCOMMITTEES ON  
COAST GUARD AND NAVIGATION  
AND MERCHANT MARINE

OF THE

COMMITTEE ON  
MERCHANT MARINE AND FISHERIES  
HOUSE OF REPRESENTATIVES

ONE HUNDRED THIRD CONGRESS

FIRST SESSION

ON

DEVELOPING MARITIME REFORM POLICY AND RECOM-  
MENDATIONS FOR SIMPLIFYING COAST GUARD CON-  
STRUCTION REQUIREMENTS

JUNE 17, 1993

Serial No. 103-50

Printed for the use of the Committee on Merchant Marine and Fisheries



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# COAST GUARD SHIPBUILDING STANDARDS

THURSDAY, JUNE 17, 1993

HOUSE OF REPRESENTATIVES,  
SUBCOMMITTEE ON COAST GUARD AND NAVIGATION, JOINT  
WITH SUBCOMMITTEE ON MERCHANT MARINE, COMMIT-  
TEE ON MERCHANT MARINE AND FISHERIES,

*Washington, DC.*

The subcommittees met, pursuant to call, at 10:00 a.m., in room 1334, Longworth House Office Building, Hon. W. J. (Billy) Tauzin (Chairman of the Subcommittee on Coast Guard and Navigation) presiding.

Present: Representatives Tauzin, Lipinski, Pickett, Hastings, Bateman, Coble, and Bentley.

Staff Present: Coast Guard Subcommittee—Elizabeth Megginson, Staff Director; Rusty Savoie, Professional Staff; Bill Wright, Professional Staff; Jim Adams, Professional Staff; Catherine Tucker, Legislative Clerk; Merchant Marine Subcommittee—Keith Lesnick, Staff Director; David Honness, Professional Staff; Cher Brooks, Counsel; Randy Morris, Legislative Clerk; Full Committee—John Cullather, Professional Staff; Lee Crockett, Professional Staff; Minority—Edward L. Lee, Professional Staff; Rebecca Feemster Dye, Counsel; Hugh N. (Rusty) Johnston, Jr., Counsel; and Margherita Woods, Staff Assistant.

## STATEMENT OF HON. W.J. (BILLY) TAUZIN, A U.S. REPRESENTATIVE FROM LOUISIANA, AND CHAIRMAN, SUBCOMMITTEE ON COAST GUARD AND NAVIGATION

Mr. TAUZIN. Good morning. The hearing will come to order. Today the Subcommittee on Coast Guard and Navigation joins with the Subcommittee on Merchant Marine to review Coast Guard shipbuilding standards. In the 102nd Congress, this committee and the previous administration began an effort to develop maritime reform policy and legislation. As part of that effort, the Coast Guard was asked to develop recommendations for simplifying Coast Guard construction requirements. The Coast Guard has formed the Maritime Regulatory Reform Working Group which has consulted with maritime and shipbuilding industry representatives. We look forward to hearing of their progress to date.

With us today is Rear Admiral Gene Henn, Chief of the Coast Guard's Office of Marine Safety, Security, and Environmental Protection; Mr. Gene Pentimonti of American President Lines who is accompanied by Mr. Hugh Rynn of Sea-Land Services, who are here representing the deep-draft industries; Mr. Thomas Carman of

the Delta Queen Steamboat Company; and Mr. Gary Rook of Edison Chouest Offshore, an offshore supply vessel corporation.

And finally, Mr. John Stocker of the Shipbuilders Council of America. Also in our audience is retired Rear Admiral Sid Wallace, former counsel to this committee, now a member of a local law firm representing Liberty Marine. Admiral Wallace has an extensive background in vessel safety and international regulation and has offered his assistance to us. Thank you Admiral Wallace.

The industries represented today have met with the Coast Guard to discuss specific recommended changes in the Coast Guard shipbuilding standards. Gentlemen, I welcome all of you and appreciate your participation today and your joint efforts with the Coast Guard. Let me also express the subcommittee's appreciation to Admiral Henn for undertaking this very important effort to assist the U.S. Flag maritime and shipbuilding industries. Gene, we admire and appreciate your work.

Before I recognize Chairman Lipinski, I want to express my personal appreciation for his work and that of subcommittee Ranking Member Bateman. Both of you have given the U.S. maritime industry and this committee hope despite recent opposition to extension of maritime subsidies.

Thank you gentlemen for that excellent work.

The Chair now recognizes Merchant Marine Subcommittee Chairman Bill Lipinski.

Mr. TAUZIN. Bill.

#### **STATEMENT OF HON. WILLIAM O. LIPINSKI, A U.S. REPRESENTATIVE FROM ILLINOIS, AND CHAIRMAN, SUBCOMMITTEE ON MERCHANT MARINE**

Mr. LIPINSKI. Thank you, Chairman Tauzin.

This year the members of the Merchant Marine and Fisheries Committee face a challenging test, the revitalization of the United States Merchant Marine. In order to do this, we are leaving no stone unturned. That is why I approached Chairman Tauzin about today's proceedings.

One of the problems facing American shipbuilders and flag carriers is the difference between U.S. and international standards. Some of these differences result from greater U.S. safety standards to prevent loss of life and serious environmental damage. It appears, however, there are some U.S. standards that raise American construction expense-but are not cost effective in terms of safety. It is my hope that this hearing can help us identify those specific standards and offer cost cutting remedies.

I would like to take this opportunity to thank Chairman Tauzin and his staff for all the hard work they have done in preparing for this hearing. I know the chairman has been working for some time on reviewing Coast Guard shipbuilding standards and I applaud his efforts.

I would also like to thank all of today's witnesses for appearing here today to help us come to terms with the questions we have on this important subject.

Thank you, Mr. Chairman.

Mr. TAUZIN. Thank you, Bill.

I am pleased now to recognize the Ranking Minority Member of the Coast Guard Subcommittee, Mr. Coble.

**STATEMENT OF HON. HOWARD COBLE, A U.S. REPRESENTATIVE FROM NORTH CAROLINA, AND RANKING MINORITY MEMBER, SUBCOMMITTEE ON COAST GUARD AND NAVIGATION**

Mr. COBLE. Thank you, Mr. Chairman. I want to thank you and Chairman Lipinski for having called this hearing. Admiral Henn, I want to echo what the chairman said about your working with this committee.

Mr. Chairman, I have two subcommittees working simultaneously. If I have to play hopscotch, it is not because I am not interested in what will occur here today. I am sure the Coast Guard and the maritime industry will both illuminate this hearing as we proceed.

I believe in simplifying regulatory standards for the building of U.S.-flag vessels will greatly enhance the competitiveness of the U.S. Merchant Marine. As I said, I am sure the Coast Guard and the industry will present ideas about streamlining the often burdensome U.S. marine equipment and construction standards. I tend to support moves which would integrate U.S. standards with international ones. U.S.-flag vessels should be allowed to be on a level playing field with foreign carriers but of course, in doing so, we should not compromise safety at all.

Thank you, Mr. Chairman.

Mr. TAUZIN. Thank you. Are there any other opening statements by members?

The Chair recognizes Mr. Hastings.

**STATEMENT OF HON. ALCEE HASTINGS, A U.S. REPRESENTATIVE FROM FLORIDA**

Mr. HASTINGS. Thank you, Mr. Chairman, and members of the committee. It gives me great pleasure to recognize maritime members and the Coast Guard who are working with ship safety. The Coast Guard has been regulating United States vessels and has conducted themselves in a more than admirable fashion. I commend their work and encourage greater efforts to minimize safety hazards on our waterways.

It is very important that we allow private industry to participate in the regulatory process to be sure that the standards can be realistically met. With the cooperation that has been man-tested in the past, and likely to be continued in the future between the Coast Guard and maritime businesses, I am confident that construction regulations will be fair and safe and I look forward to this particular proceeding and will listen closely to the recommendations of our witnesses.

Thank you, Mr. Chairman.

Mr. TAUZIN. Thank you, Mr. Hastings. Are there any further opening statements?

[The statement of Mr. Fields follows:]

STATEMENT OF HON. JACK FIELDS, A U.S. REPRESENTATIVE FROM TEXAS, AND  
RANKING MINORITY MEMBER, COMMITTEE ON MERCHANT MARINE AND FISHERIES

Mr. Chairman, I am pleased that this hearing was scheduled. One of the main reasons that the U.S. maritime industry is competitively disadvantaged is that U.S. regulatory requirements are more onerous than those of our foreign counterparts.

Last year, Secretary of Transportation Andrew Card directed the Coast Guard to review U.S. ship construction standards as part of the maritime reform initiative he proposed for the merchant marine industry. Since then, the Coast Guard has been working with shipbuilders and operators to determine ways to reform shipbuilding standards to provide relief from unnecessary requirements. One of the options available to the Coast Guard is to adopt international ship construction standards for the United States.

I support this regulatory reform effort as part of a broad maritime reform package to provide relief to the U.S. merchant marine industry. Much confusion exists internationally concerning U.S. shipbuilding standards. Often, U.S. vessel operators are unjustly forced to pay a premium to buy equipment from foreign sources due to this confusion. I hope the Coast Guard will act quickly to adopt standards that respond to the concerns of the merchant marine industry and, at the same time, preserve the high ship construction standards valued by the United States.

This effort marks a significant first step along the way to leveling the international playing field, thereby allowing American companies to compete more effectively with less regulated foreign operators. If we begin chipping away at these inequities, one day we may find ourselves with a rejuvenated merchant marine. I look forward to hearing the witnesses today.

Thank you, Mr. Chairman.

Mr. TAUZIN. We are very pleased now to welcome our first witness, Rear Admiral Gene Henn of the Office of Marine Safety, Security and Environmental Protection, U.S. Coast Guard.

Gene, as you know, we have invited all the other panel members at the table as we are going to try to customarily do from now on, and we will hear from all of you before we open it up to questions.

The written statements are, by consent of the committee, made a part of the record. We would appreciate it if you would kindly summarize in about five minutes the testimony that you have.

**STATEMENTS OF REAR ADMIRAL ARTHUR E. "GENE" HENN, CHIEF, OFFICE OF MARINE SAFETY, SECURITY, AND ENVIRONMENTAL PROTECTION, UNITED STATES COAST GUARD; EUGENE K. PENTIMONTI, VICE PRESIDENT FOR GOVERNMENT SERVICES, AMERICAN PRESIDENT LINES, LIMITED, ACCOMPANIED BY HUGH STEPHEN RYNN, DIRECTOR, FLEET ENGINEERING, SEA-LAND SERVICE, INC., REPRESENTING LINER OPERATORS, AND THE AMERICAN INSTITUTE OF MERCHANT SHIPPING; THOMAS CARMAN, VICE PRESIDENT, MARINE OPERATIONS, DELTA QUEEN STEAMBOAT COMPANY, REPRESENTING THE PASSENGER VESSEL ASSOCIATION; GARY ROOK, TECHNICAL DIRECTOR, EDISON CHOUSET OFFSHORE, INC., AND OFFSHORE SUPPLY VESSEL OPERATOR; AND JOHN STOCKER, PRESIDENT, SHIPBUILDERS COUNCIL OF AMERICA**

**STATEMENT OF REAR ADMIRAL ARTHUR E. "GENE" HENN**

Admiral HENN. Thank you, Mr. Chairman.

Sir, as you know, the Coast Guard has long been an advocate of leveling the economic playing field between domestic and foreign flag vessel construction and operation, consistent with our obligation to ensure vessel safety and protect the environment. We have a long history of active involvement with various national and international standards-making committees, and we have success-

fully ensured that safety has been retained as a key element of the standards-making process.

As a result of the continued growth in our congressionally-mandated responsibilities, our sphere of interest and involvement has expanded to encompass more than 60 different standards-making bodies.

In the historical evolution of shipboard construction standards, each flag state initially developed and implemented its own standards. The International Maritime Organization then became the forum for establishing international safety standards which, ideally, all member states ratify and implement.

This process helps create a level playing field among the maritime industries of the member flag states; however, complete parity has yet to be achieved.

As a result of a number of studies that were done during the 1970's and early 1980's, our U.S. maritime industry believes-and truly believes-there is a significant cost differential between building a vessel to U.S. standards as opposed to building it to foreign standards. The differential in cost can actually be attributed to many factors, including differences in employee wages, material costs, construction time, and local subsidy policy, as well as the owner's involvement or lack of involvement in the construction of his or her vessel.

However, all but one of the studies were conducted prior to the 1974 Safety of Life at Sea-SOLAS-Convention and the 1981 and 1983 SOLAS Amendments. The changes brought about by SOLAS have greatly reduced the gap between U.S. and international standards. We must remember SOLAS itself is not a stand-alone document.

Admittedly, the United States at times has unilaterally imposed more stringent standards than the international regulations promulgated by IMO, but these few cases were not discretionary cases and they were for good reason. One was the Safety Act of 1978, where we upgraded steering requirements for vessels. These regulations were drastically needed and had to be done quickly, as were the double hull requirements of the Oil Pollution Act of 1990, which indeed have become the standard of the world.

Nevertheless, a Maritime Administration-sponsored study conducted in 1979 took a look at the additional costs between U.S. and foreign standards and attributed to the Coast Guard less than one-half of 1 percent of the increased cost. However, as Secretary Peña has pointed out, one-half of 1 percent, when you are talking about a \$100 million vessel, is still too much.

In the summer of 1992, I had my staff conduct a limited comparison of ship design and construction standards between the Code of Federal Regulations and a combination of SOLAS and American Bureau of Shipping-ABS-Rules. The preliminary results showed that a combination of SOLAS and ABS Rules would provide a safety level equivalent to CFR requirements for about half the standards that we reviewed. As a result, I formalized this effort and created my Maritime Regulatory Reform staff to take this work further. They initiated a formal follow-up of these results and we have scheduled a July meeting for a combined Coast Guard/in-

dustry team to pursue further comparison of these regulations and codes to indeed eliminate redundancies.

Having said that, sir, the Coast Guard truly believes in international competitiveness for our U.S. industry, while improving overall maritime safety. We have done such things as promote the IMO Safe Management Code, endorsing manufacturer's self-certification of products to comply with industry adopted standards, setting international standards for recognized classification societies, increasing port State control and reemphasizing flag State enforcement, as well as supporting the full use of international standards organizations.

So, I am happy to report that with the leadership of our Commandant, Admiral J. William Kime, as well as the leadership of such folks as Rear Admiral Sid Wallace, the former chairman of the Marine Environmental Protection Committee, as well as groups such as the American Institute of Merchant Shipping and our Shipbuilders Council of America, as well as the support from our industry as a whole, we, the United States, are indeed setting the pace for international standards worldwide. The United States is number one.

Thank you, sir.

Mr. TAUZIN. Thank you very much Admiral Henn.

[The statement of Admiral Henn may be found at end of hearing.]

Mr. TAUZIN. Our next witness will be Mr. Eugene Pentimonti, Vice President of Government Services for American President Lines, Limited. He will be accompanied by Mr. Hugh Stephen Rynn, Director of Fleet Engineering for Sea-Land Service, representing the liner operators in the American Institute of Merchant Shipping.

Mr. Pentimonti.

#### STATEMENT OF EUGENE K. PENTIMONTI

Mr. PENTIMONTI. Thank you, Mr. Chairman. I am a naval architect and marine engineer and have been responsible within our company for ship design and construction for the last 20 years. Most recently I have been responsible for overseeing our U.S. flag vessels that were built in a foreign shipyard.

We thank you very much for this opportunity to present APL and Sea-Land's perspectives on a problem that is reducing the international competitiveness of the American merchant marine: Duplicative and excessive U.S. Coast Guard requirements for vessel design, equipment, maintenance and inspection which are imposed on U.S.-flag vessels, but which are not applicable to their foreign-flag competitors. We seek relief from this costly regulatory burden, so that U.S.-flag operators can compete on a level playing field with foreign competitors.

The scope of this problem is fairly extensive. We believe that the costs of new construction of these vessels under the U.S. standards is as much as 5 percent of the vessel cost. Also, there are operating costs in the ongoing maintenance of the vessels which increase our costs over those of our foreign competitors.

We did a calculation showing that for a U.S.-flag fleet of about 25 vessels, over the life of those vessels, the total cost difference could be as much as \$200 million. So we are talking about a significant problem.

In ocean shipping, many of the standards regarding vessel design, equipment, maintenance, operation, and inspection are established in international agreements to which the United States is a part. Vessels flying the flag of one nation are accepted at the ports of other nations, including the United States, if the vessels meet those international standards.

However, numerous additional requirements have been developed by the Coast Guard for application to U.S.-flag vessels only. In short, the U.S. Government fully accepts as safe foreign-flag vessels which call at U.S. ports so long as they meet international standards. Now, we agree that those vessels are safe, yet when implementing those standards for U.S.-flag vessels, the Coast Guard imposes additional, costly, and unnecessary requirements.

These additional standards reduce the cost competitiveness of U.S.-flag ships wherever they compete with foreign-flag vessels. These requirements not only add to the cost of initial construction of a U.S.-flag vessel-no matter where in the world it is built-but add costs to maintaining the vessel.

What we are talking about, really, is two sets of safe standards. But we suffer particularly from the bureaucratic burden of those under which we operate. There are three elements of the standards which are burdensome to us: one, regulations in the standards which are redundant to classification society rules; two, regulations which create unique, Americanized versions of the widely recognized and U.S.-participated international vessel standards; three, regulations which incorporate restrictive national codes within the U.S. regulations.

All of these requirements impose greater costs on our vessels than international standards imposed on foreign-flag vessels with whom we compete.

What is our objective here today? It is to secure equal treatment with international standards for our U.S. flag vessels. Eliminating duplication of regulatory and classification society requirements will not adversely affect the safety of U.S. flag vessels.

It is estimated that roughly two-thirds of all Coast Guard inspections duplicate those done by the American Bureau of Shipping. If classification societies inspect the same items to the same or greater standards, it is not a good use of taxpayer money for the Coast Guard to be duplicating this effort.

One way to eliminate the unfair inspection burden on U.S. flag operators would be to change Coast Guard rules to provide that vessels surveyed, as required by ABS and otherwise maintained in class, would be considered as satisfying U.S. inspection requirements.

In those instances where the agency has placed a standard other than an inspection standard which is beyond international norms, the U.S. Coast Guard should either conform the wording of the rules to international norms or provide that conformance with classification society rules to satisfy regulatory requirements.

Even in those instances where the Coast Guard believe that one of the standards has a desirable effect on the structural or operating safety of the vessel, we do not believe that unilaterally burdening the U.S.-flag vessels is appropriate. We believe that the agency should respond by first aligning its standards by U.S.-flag vessels competing in international commerce with international norms. Then it should work to persuade the International Maritime Organization to approve its suggestions for vessels of all flags, not just those flying U.S. flags, and not apply them unilaterally.

On March 2, 1992, we responded to the Department of Transportation's request for public comment on its implementation of President Bush's initiative to reduce the burden of government regulation. APL and Sea-Land submitted a 72-page document which contained approximately 300 vessel design equipment maintenance and operating standards recommended for deletion or revision.

We understand over the past year, the Coast Guard, working with ABS, has made significant progress in identifying and evaluating duplicate requirements. However, to the best of our knowledge, very few, if any, of those have been changed.

As indicated, we are working very closely with the U.S. Coast Guard, most recently in their maritime regulatory reform working group. Now, with the industry participation and under the leadership of Admiral Henn, we believe we have an opportunity to work constructively to establish changes needed at the earliest possible date.

But we need more than the process that has been set up. We need changed regulations. It is our assessment that roughly 60 percent of the suggestions, which were made in our report concerning roughly 180 of some 300 regulations, are broadly accepted by the Coast Guard.

We would hope the agency would not hold back agreed-upon items while we study the others. We see no reason why the agreed-upon items could not be subject to prompt action. For example, they could be issued as interim final rules, perhaps taking only four to six weeks. Some might be resolved through the prompt issuance of navigation and vessel inspection circulars. We also seek expedited action on those items where agreement has not yet been reached, which will be the agendas of the subjects we have set up within our working group.

We recognize that we are asking the Coast Guard to change its approach to maritime regulation, as we realized that it will require a great deal of effort, but the agency has had some of the ground work already done, and should be able to act quickly. Reforms that take years to implement will be too late to help what remains of the U.S. foreign trade liner fleet.

We appreciate your committee's support in holding this hearing which, by itself, shows the priority regulatory reform must be given. We would also ask the committee to monitor the situation closely and, if appropriate, consider holding a follow-up hearing later this year to ensure that the issues are being resolved promptly.

Thank you very much.

Mr. TAUZIN. Thank you, Mr. Pentimonti. That has been our standard practice, to follow up these hearings.



[The statement of Mr. Pentimonti and Mr. Rynn may be found at end of hearing.]

Mr. TAUZIN. Mr. Rynn.

### STATEMENT OF HUGH STEPHEN RYNN

Mr. RYNN. Good morning Mr. Chairman, members of the House, committee staff, fellow panelists and interested observers. My name is Hugh Stephen Rynn. I am the director of fleet engineering for Sea-Land Service, Inc. I am a graduate marine engineer and I have worked in the marine industry in new construction, design, and maintenance of vessels for over 25 years.

Finally, and maybe this will account for my nervousness, I am certifiably from outside the Beltway, so please bear with me.

Mr. TAUZIN. I am just as nervous as you are.

Mr. RYNN. Well, thank you for those words of encouragement. Before I make some points, I just want to again reemphasize what is the scope of the problem from our perspective.

The scope of the problem, and I think that there has been a number of figures put forward, but generally everybody has agreed that there is a differential from 1 to 8 percent cost increase for U.S. standards.

In addition, we see an increased operating cost of almost \$100,000 per year per vessel for compliance with the U.S. regulations. How did that occur? Essentially, we live in a world of dual regulation. The U.S. Government, through the efforts of the Coast Guard, has for a long time established a standard of regulation that has been a model for the world.

It certainly, through the efforts in IMO, has raised international standards and through the actions and activities with the various classification agencies have in fact raised international standards to a very acceptable safety level.

These dual regulations come about because we, as commercial operators, are obligated to follow the international norm which is classification society survey, and inspection. In the United States, there is an agency called the American Bureau of Shipping. This agency has been recognized by the U.S. Government as being in fact the designated issuer of the loadline of a vessel.

In order to assign that load point on a vessel, the Coast Guard has seen fit to endorse the ABS review and validation of the strength of the ship. So the entire venture at sea, the strength of this vessel, is completely a function of ABS rules, and the Coast Guard regulations do not touch on those areas.

The areas that cause us the greatest problems in industry are in design, construction, and inspection standards, particularly with respect to equipment. If I can give an example, with improved technology today, it is very possible that a ship's underwater hull paint can be applied once every five years. This enables us to obviate the need to pull the vessel out of water every two-and-a-half years and do a dry-dock examination and repainting. While the Coast Guard regulations do permit some waivers, in fact those are very restrictive as compared to the international norms.

Further, the Coast Guard still requires that we open and examine all sea valves during this underwater examination. As you can

appreciate from the point of safety, we are very concerned about opening a sea valve even though it has an external plug when a vessel is in the water. You could essentially flood the whole ship from opening a plug when the vessel is in the water. You could essentially flood the whole ship should the plug let go or some other problem or casualty occur.

It has been estimated in our discussions with the American Bureau of Shipping which the Coast Guard is intimately involved with, that almost 80 percent of the ABS surveys are duplicated by U.S. Coast Guard inspections. So that is where this duality comes from. In aggregation, these redundant and restrictive regulations add over \$100,000 cost to a vessel operation each and every year of its operating history.

Let me emphasize that we are not talking here about a difference in safety, but these international standards and classification rules which the Coast Guard also helps to set very clearly are of paramount importance to our company where we pride ourselves on safety, reliability, and also commercial viability. If you are unsafe you don't sail, you don't get the cargos.

Since time is short, I just want to sum up my view on this by explaining where we are today in the regulatory process. On March 2, 1992, we submitted to the Secretary of Transportation a document with over 300 regulation citations, explicit citations of redundancies. Since that time, only one item has been changed and that was subject to a change process prior to our submission.

This pace is particularly disappointing. We understand from Admiral Henn that almost 60 percent of those citations we made, the Coast Guard is in complete agreement are redundant and unnecessary for a classed vessel. We realize this department is faced with competing priorities, but time for action is critical.

Our ability to compete is a function of how quickly we are able to resolve some of these very crucial issues. Thus, we ask the administration to ensure that actual relief occurs by the end of this year. Admiral Henn has already committed to undertake that task. We would appreciate the committee's support in establishing this as a priority. We hope you will consider holding follow-up hearings later this year to ensure prompt resolution of this matter.

Thank you, Mr. Chairman.

Mr. TAUZIN. Thank you, Mr. Rynn.

Mr. TAUZIN. In introducing the next witness, Mr. Thomas Carman, Vice President, Marine Operations Delta Queen Steamboat Company, representing the Passenger Vessel Association, I want to also note the presence in the audience today of Mr. Ward Breaux, Vice President of Breaux Brothers in Loreauville, Louisiana which is also in my district who has sent us some communications in support of Mr. Carman's testimony, indicating the reverse problem, a problem where the Coast Guard is implementing an IMO regulation on cruise ship stability regulations and applying it to inland passenger vessel construction, perhaps inappropriately.

You have heard some of the problems that have just been cited to us where the Coast Guard has different regulations than IMO. So our members may want to see this communication. I think it relates to the testimony you are about to hear.

We welcome you, Mr. Carman, and will appreciate your testimony.

### STATEMENT OF THOMAS CARMAN

Mr. CARMAN. Thank you. Good morning, Mr. Tauzin, Mr. Lipinski, and other members of the subcommittee. Thank you for the opportunity to appear and address a major issue confronting the U.S. flag passenger vessels industry. I appear today to represent both Delta Queen Steamboat Company and the Passenger Vessel Association of which our company is a member.

The Passenger Vessel Association consists of more than 500 companies involved in the operation of approximately 1,200 vessels employing thousands of people across the country and serving approximately 1 million passengers annually.

The Delta Queen Steamboat Company operates two paddle-wheel cruise vessels and has contracted with McDermott, Inc. in their Morgan City shipyard to have a new vessel constructed, a 417-foot, 420-passenger vessel for service in the western river systems. I personally directed the design and development of this project and will oversee its actual construction which will begin on Monday, June 21, 1993.

This project is, I believe, the largest commercial construction project in a U.S. shipyard today and the largest overnight passenger vessel to be built in this country in 40 years.

Through direct experience and participation in the Passenger Vessel Association, we are critically aware of the impact of Coast Guard regulations and policies on our industry. The outstanding safety record of our industry is a direct result of strict inspections and enforcement of the Code of Federal Regulations by the U.S. Coast Guard and our industry's awareness that safe operation is essential and in fact, good business.

The industry has and wishes to continue to work with the Coast Guard to maintain safe operation and adequately design vessels. Government regulations of safety standards for our industry are justified but should be based on demonstrable need and a sound, technical foundation as well as being appropriate and properly applicable.

We presently have four major areas in which we feel the existing regulation, proposed regulation, Coast Guard plans and policies do not effectively serve and in some cases inhibit our activity.

The first one is the matter of equivalency or alternatives to existing requirements. The Coast Guard has exhibited a positive attitude toward the consideration of alternatives or equivalent approaches to satisfy existing regulations. The presently developing a NAVIC regarding extension of length of main vertical fire zones for casino and day excursion vessels is an example.

However, when the industry proposes and effectively presents alternatives, the Coast Guard looks at the alternatives but usually does not do an evaluation as to the validity and applicability of the regulation in the first place. Again, the main vertical fire zone may be used as an illustration.

It has been acknowledged that the proposed length restriction or the required length restrictions to 46 CFR 72.05.5 H is really based

on twice the length between necessary subdivision bulkheads found for a group of oceangoing passenger vessels that were studied many years ago.

The length restriction has no technical basis to really define fire safety or fire control. Unquestionably, structural fire protection divisions do contribute to fire safety and the ability to protect passengers and crew in case of fire. But the existing designated limitation has no more validity than any other. The development of fire detection and suppression systems over the past four decades has not been accounted for by any modification of this regulation.

When the industry sought relief in 1992, it found that extension of the length limitation could be obtained at the cost of sprinkler systems, fire detection system, smoke extract systems, increase in escape routes and refuge area requirements. The correctness or the validity of the basis of the original restriction was disregarded.

The industry believes this to be unreasonable. Further, the wide range of additional safety features required to accomplish equivalency is excessive, particularly if the original restriction is being questioned as to its validity. The proper procedure would be to evaluate and eliminate or replace outdated regulations which do not have technical justification.

This process of determining equivalency should not solely consist of adding regulations. It should equally involve revision or deletion of inappropriate or outdated regulations.

My second point is that consideration of service areas as related to exposures or hazard. The existing structural fire protection regulations and new damage stability survival regulations requirements and certain other requirements of 46 CFR do not take into account the fact that the hazards of unrestricted ocean service are significantly greater than those existing when operations are confined to rivers, harbors, and of course, the canals and other protected waters.

I might advise that, to our knowledge of all of the vessels, the U.S. flag passenger vessels, only four at the most ever engage in international voyages. So we are looking at domestic routes, not international routes. It seems incomprehensible to us that requirements predicated on ocean service and virtually out of distance from sources of assistance and rescue should not be modified for vessels of less demanding service.

Our new vessel, and in fact many other designs, are in fact penalized by recent modification of the damage stability survival criteria. Unless these criteria are qualified at an early date, construction may be slowed.

The third point, which is related to number two, is the imposition of international voyage IMO regulations on a domestic industry. The damage stability criteria that I mentioned previously is a case in point where an international voyage criteria have been applied to domestic vessels. We contend that such action, without in-depth evaluation of consequences, is both inappropriate and harmful to our industry, without technical or historic justification.

As an example, to require water tight closures on a river vessel such as our new design, to a point of six or seven feet above the main deck we feel is ludicrous. We appealed this requirement, and with the cooperation of the Coast Guard, we were given an oppor-

tunity to provide equivalency when in fact the original requirement we do not feel is valid for the type of service the vessel serves.

We can guarantee that our new river boat will not be hit by a 30-foot wave in western rivers of the United States while it is damaged. This problem relates to the entire equivalency approach.

The fourth point is utilization and incorporation of land-based standards for materials. This is particularly significant with regard to structural fire protection and fire suppression. U.S. vessel operators suffer from increased cost of construction because materials approved under many land-based fire codes are not approved by the U.S. Coast Guard.

Land-based sprinkler standards and statistics showing the effectiveness of land-based fire control and suppression have received little consideration. A thorough review of land-based materials criteria and historic data is essential.

Our industry stands willing to address these major concerns and is presently and will continue to work with the Coast Guard to effectively and efficiently assist in the reevaluation of existing regulations in the development of simpler, properly applicable new standards.

Thank you.

Mr. TAUZIN. Thank you very much, Mr. Carman.

[The statement of Mr. Carman may be found at end of hearing.]

Mr. TAUZIN. Our next witness is Mr. Gary Rook, Technical Director of Edison Chouest Offshore, Inc., an offshore supply vessel operator.

Mr. Rook.

#### STATEMENT OF GARY ROOK

Mr. Rook. Thank you, Mr. Chairman and members of the subcommittee. As you said, I am the technical director of Edison Chouest Offshore in Louisiana. We are designers, builders, owners and operators of small offshore vessels.

We have over 40 vessels in our fleet. They range from 85 feet to 310 feet in length. We work in all areas of the world including the ice-covered waters of Antarctica. We have eight vessels on long-term charter to the government including with an additional two under contract right now and being constructed.

As you know, most regulations as related to the design and construction of vessels are tied to tonnage, the gross tonnage of a vessel. Tonnage is basically a measure of the internal volume of a ship, not the size or necessarily the cargo capacity. Each country has its own regulations called national register tonnage.

In these tonnages, there are many avenues to artificially reduce the tonnage of a ship. This allows the vessel to meet less stringent requirements than might be required if the tonnage was higher. Basically, I am saying the tonnage does not reflect the size or complexity of the vessel but the skill of the designer.

In 1969, the IMO convention instituted international tonnage which basically reduced the amount of exemption and gave them more true measure of the size of ship.

I have compared three ships in our fleet that were built. Two of these vessels were designed to artificially reduce tonnage and the third vessel, designed for the same mission but tonnage reduction methods were not considered. This is noted in my written testimony. Basically the vessels being almost the same physical size, the tonnage range was very great.

In 1990, our company emphasized a new philosophy on safety and maintenance in design of ships rather than tonnage. In doing this, what we did is we tried to increase the safety of the ship and, of course, of the personnel working on the ship.

Our vessels are usually in a classification of OSV, which means offshore supply vessel. The definition by law of an offshore supply vessel is that it must be between 15 and 500 gross tons. It can carry no more than 12 passengers in addition to the crew on an international voyage or 16 on a U.S. voyage and it regularly supports the exploitation of oil and mineral industries in the U.S.

If you exceed the 500-ton limit on tonnage, the vessel cannot be an OSV anymore. It must become a sub-Chapter I vessel. This means that no matter what the mission statement of the vessel is, that it must meet sub-Chapter I regulations. So, essentially, our new vessel that is a safer vessel for the crew and exceeds 500 gross tons, doing the same job, costs more to build, therefore we cannot compete in the market anymore.

Essentially what will happen is that we will have to go back and play what we call tonnage games to reduce the tonnage of these ships downward to compete. I will state several of the problems that we encountered when we exceed the 500 gross ton limit.

One, we have to install an emergency generator. While this is a small cost, it is still not required on OSVs. Our position is that we feel all vessels should have an emergency generator. We agree with this statement. But unfortunately OSVs are exempted.

Another area is vital systems automation. This concerns the propulsion control systems of the ship and also the alarm and monitoring. In general, certain areas of the Coast Guard regulations are poorly defined. They state the designer should call the Coast Guard well in advance to discuss the merits of the design of his system instead of stating it in the regulations. I will state several instances.

We had a propulsion control system fitted on four boats. We purchased these systems from a Norwegian company, renowned worldwide. Identical systems had been fitted on hundreds of non-U.S. flag ships throughout the world, including vessels of the Royal Viking Line Cruise Ships.

An identical system in design to that as fitted on the Royal Viking Sun was rejected as unfit for review by the Coast Guard for our vessel the *Geco Marlin*. This was basically due to a format problem. It was not necessarily the contents of the submission. We had to resubmit the plans which delayed Coast Guard review, thereby delaying the delivery of the vessel for 10 days at a cost of approximately \$120,000 to my company. The eventual result of this was the changing of flag of this ship from U.S. to foreign.

If a vessel goes on an international voyage, the equipment and components must be in accordance with SOLAS. As previously stated by the other witnesses, SOLAS does not necessarily mean it

is good enough for Coast Guard. I will state another instance on our ship, the Nathaniel B. Palmer, where the rescue boat and davit was verbally approved by the Coast Guard inspector at his attendance at the shipyard. It was purchased, ready for shipment.

We were informed by Washington that this boat and davit had to meet U.S. Coast Guard requirements also. The results of this, we had to send an inspector to Norway to reinspect and retest davits for the boat that had already been done. The irony is that 300 identical boats and davits to this had been fitted on non-U.S. flag vessels throughout the world.

I guess my question is: Is the rest of the world wrong and we are right here? Are their boats unsafe and ours are? It gives the foreign competitors an advantage over us.

Another area that we ran into on this new vessel was the institution of OPA 90, the Oil Pollution Act. OSVs and OSRVs-oil spill response vessels-are exempt from OPA 90. Whereas our ship, even though it is performing the function of an OSV, exceeds the 500 gross ton limit, therefore, it is treated as a sub-Chapter I vessel and is currently looked at by the Coast Guard who enforces this regulation, as a tanker, even though we do not have to meet Coast Guard sub-Chapter D regulations as a tanker for the construction.

Essentially what happens is that all hydrocarbon tanks that carry cargo must be double-skinned in the ship. Now I will state for the record, ECO has no problem with OPA 90. We agree with it. This was intended to prevent environmental disasters like the *Exxon Valdez* spill. However, for the new generation of supply vessel that we propose, we have to double-skin liquid mud tanks and I will define liquid mud as a water-based drilling solution that may contain 5 percent diesel oil.

In the worst case, our vessel has 5,000 gallons of diesel oil in this tank. Just forward and aft of these cargo tanks, we are allowed to carry ships' fuel, 100 percent diesel, all directly against the shell. This represents, say, 195,000 gallons on this ship. All ships fuel is exempt from inclusion in OPA 90. Our vessel can carry a total of the 200,000 gallons while a supertanker may carry several million gallons. In addition, the supertanker's fuel oil will be heavy fuel. Ours is diesel.

I will read directly from U.S. Coast Guard comments in an OPA 90 discussion. "The Coast Guard does not concur with the extension of double-hull protection for the fuel tanks. Oil that is carried in fuel tanks represents a relatively small risk to the environment compared to a large amount of oil contained within its cargo block." OPA 90 is an exhaustive burden to apply to vessels such as the ECO new generation supply vessel. The regulation makes no sense to apply to this ship.

The Coast Guard states in their response to comments that fuel tanks represent a small risk, yet we are forced to protect tanks that even if dumped into the water would have little or no effect on the environment. The Coast Guard has stated in its Marine Safety Manual that its objective is "to have vessel inspection laws and regulations so as to promote safe, well-equipped vessels that are suitable for their intended service without placing an unnecessary burden on the economic and operational needs of the marine industry." That is a direct quote.

They have also stated—

Mr. TAUZIN. Mr. Rook, we are going to ask you to try to wrap it up soon.

Mr. ROOK. Yes, sir. Basically these policies that are forced on us increase the cost of our vessel and they make us noncompetitive. We will have to go back to the old methods of design. We have attempted to build a safer vessel, a more efficient vessel, yet we are penalized.

We would offer that the Coast Guard or legislature can look at changes such as accepting the formats of other regulatory agencies, universal acceptance of SOLAS and the redefinition of an OSV. We are proposing that we would add one sentence to the OSV definition which would allow the inclusion of international tons.

If you could go 500 U.S. register tons or 4,000 international tons, if you were over 500 tons and accepted the 4,000 international, you would have to be in compliance with SOLAS. This would allow you to reduce the tonnage of the ship and not have to pay the implications of SOLAS, or you could go to a high tonnage ship, achieve the maximum higher levels of safety and maintainability and still be competitive.

Thank you.

Mr. TAUZIN. Thank you very much, Mr. Rook.

[The statement of Mr. Rook may be found at end of hearing.]

Mr. TAUZIN. Our last witness is Mr. John Stocker, President of the Shipbuilders Council of America.

Mr. Stocker.

#### STATEMENT OF JOHN STOCKER

Mr. STOCKER. Thank you, Mr. Chairman, for the opportunity to appear here today and comment on the views of the shipbuilding industry with regard to Coast Guard standards and specifications that may make it difficult for us to compete in the marketplace and to provide world standard equipment and construction standards for the domestic fleet.

Let me begin by saying that I am happy to report that the Shipbuilders Council and the Coast Guard have recognized some time ago that this was a potential problem and, in fact, beginning in about 1990, the Coast Guard and the Council have been working on a joint project to evaluate both U.S. standards and international standards from an engineering point of view to try to achieve some commonality of the two sets of standards.

The first phase of that project has been completed and that report can be made available to the subcommittees. Phase II of that project is now under way. A contract has been awarded in the early part of this year to initiate Phase II and we will be working very closely with Admiral Henn's office to assure USCG acceptance of the foreign standards.

Let me go on by saying that what we see are two principal problems. Some of them have been mentioned here. One of the most critical is the evaluation of foreign equipment that may be used on U.S.-built ships. We have encountered some difficulty with the rapidity with which design approvals have been signed off on by the Coast Guard, principally with field activities. But, again, this is



something we are working with Coast Guard headquarters on to try to improve.

We are not yet convinced, even though about 15 years ago we concluded that Coast Guard standards probably added about 11 percent to the total cost of the building in the United States, we don't believe that there are significant differences now between many of the international standards and U.S. standards.

We think they are problems of interpretation, and applicability. Some of these gentlemen this morning have addressed this and in fact there is a false perception by both U.S. and foreign entities on what constitutes a Coast Guard standard by comparison to an international standard.

In fact, we are concerned enough at this point that one of the issues we wanted to raise with you this morning is the fact that these perceptions may be affecting economic behavior to the marketplace to the extent that foreign suppliers, when they quote prices to U.S. shipyards, for components, could be adding a factor to those prices that reflects their interpretation of what the Coast Guard requirements might be.

I would like to, for the record, Mr. Chairman, add a point that in the near future, hopefully within the next few days, provide this committee with a list of items that we believe do represent higher priced quotations than would normally apply in the international markets.

Mr. TAUZIN. We will keep the record open for that purpose.

Mr. STOCKER. Thank you, Mr. Chairman.

Obviously these problems are going to persist until we both have an opportunity, within our industry as well as working closely with the Coast Guard, to try to mount a public relations campaign of some sort or at least continue to work with you and others to try to ensure that this smoke screen of differentials between the U.S. and international standards is penetrated and that those perceived differences are in fact addressed.

It may not deal with some of the vertical integration problems that we have identified in the testimony, but at least as an excuse for adding a differential on to those price quotations, these cannot be accepted in the future without some reference to the real situation that will exist here in the United States.

We appreciate the efforts that Admiral Henn and his staff are making in this area. I have had a chance to talk to the commandant about this issue. I think there is a very strong commitment within the Coast Guard to try to insure that there is a leveling of this process and we do appreciate that.

That concludes my opening comments.

[The statement of Mr. Stocker may be found at end of hearing.]

Mr. TAUZIN. Thank you very much Mr. Stocker.

The Chair recognizes himself for the five minutes.

Admiral Henn, I realize we are in basketball season, but let me ask you to imagine a football game. The referee calls the captains of the two teams. He is about to flip the coin. He says, look, I have got some good news for one of you and bad news for the other.

We have decided that we are going to give one team, we are going to supplement them, we are going to give them seven points per quarter. We have decided that the other team can only play

with nine players and only can run three downs and you can't block the quarterback anymore.

Who do you think wins the game?

Admiral HENN. I think the team that has the best advantage wins the game.

Mr. TAUZIN. You know the point. We are told by Mr. Rynn that he submitted as many as 372 pages of 300 different duplicative or different regulations from the IMO regulations and the Coast Guard regulations, that 65 percent, you have already indicated to him, are acceptable changes that could be made. But only one has been made.

I guess the basic question is: If a ship or boat that comes into a foreign port that meets IMO standards is considered a safe ship, why can't those standards be applicable to ships and boats made in America?

Admiral HENN. Well, they can be, sir, and supposedly they are. I think the point that has been raised is that we see that other flag states, many of them, are not applying SOLAS as they should to the same degree that we do. In general, when we ratify a convention we enforce that convention just as we would U.S. law. Other nations to some extent do not have the capabilities we have to do that. Others don't take advantage of that.

Mr. TAUZIN. If you have the authority, however, to say to a ship you have not complied with SOLAS, you cannot enter these waters. Why don't you do that instead?

Admiral HENN. Well, sir, what we have done to address that specific problem is, with the International Maritime Organization, we have established a specific new subcommittee, the Flag State Implementation Subcommittee to do three things: One, set standards for classification societies or other bodies that act on behalf of a flag state, set those standards so they start doing the right things and quit doing the shadowy things they are doing; second, to set standards for flag states, that in fact those who have ratified treaties do enforce those treaties rather than turn their head and not enforce them; and third, set standards for the port states on enforcement.

So we have tackled this problem. The spotlight is on the substandard flag states and the substandard classification societies. We are out to level the playing field and the rest of the world is joining with us, sir.

Mr. TAUZIN. I hope you understand the frustration of the witnesses who are here today. It basically is that here in American, we are about to deny subsidies to American flag vessels where subsidies are readily available to many foreign flag vessels.

In the end, on top of that, we are not going to give you the same advantages other vessels have. We are going to create some disadvantages with a one to, somebody said, 11 percent increase in cost because we have different regulations and we enforce them differently.

It is obviously a problem we cannot ignore, right?

Admiral HENN. You are absolutely right. We cannot ignore it. We cannot ignore it here at home, and we cannot ignore it internationally. Internationally we are addressing the problem. Here at home, we are addressing the problem through the initiatives that

we have taken, not only with the Shipbuilders Council of America, American President Lines (APL), and Sea-Land, but Liberty and a number of other very good owners and operators as well as with Delta Steamboat.

Now let me say this: The Coast Guard regulations are good regulations. What APL and Sea-Land are proposing about them, doing away with regulations, I don't plan to ever do that. For one, there are some owners who do not want to go with the classification society. There are some owners who will not choose ABS. So, we will keep the rules in place.

What I am proposing and what we have already discussed on the industry-Coast Guard team is that with the American Bureau of Shipping, we will have an addendum where we will call out where things are duplicative so that the person sitting down to cost out, to design his vessel, is only using one set of standards to design from. There is a big cost savings there, sir, and we need to do that.

Mr. TAUZIN. In the case that Mr. Rynn has pointed out that you apparently have agreed to, 60 percent of these identified areas, why has only one change been made to date?

Admiral HENN. Sir, the point here is that where there is duplication, you will find the same requirement in the ABS rules, or you will find the same requirement in SOLAS. But if we have a vessel that is not on a SOLAS voyage, if we have a vessel that is not using ABS rules but Der Noreske Veritas (DNV) rules, we need those regulations in place for those that choose different alternatives. Not everybody builds to ABS class.

Mr. TAUZIN. We have also heard arguments that the format sometimes gets in the way and that becomes very costly as one of the shipbuilders testified here today. Isn't there some way the Coast Guard cannot turn back the shipbuilder's application on the basis of format?

Admiral HENN. Yes, sir, absolutely. In that specific case, I looked into it because I was very concerned about that. It has to do with the automation system aboard the vessel. In that particular case, a foreign manufacturer submitted their plans to the Coast Guard. They didn't go through its owner.

The owner has an obligation when he is submitting a vessel for Coast Guard approval to make sure the package is complete and that the information is understandable. The owner opted not to take on that responsibility. That caused the delay.

Also, sir, I have to point out, when a company tells my staff that they have neither the time nor the money to comply with Coast Guard regulations, the problem starts right there, sir.

Mr. TAUZIN. Inevitably we hear a lot of complaints by shipbuilders and manufacturers of products. It is a very difficulty job getting the Coast Guard to approve different and new materials to see whether or not those new materials can meet the old standards and that some manufacturers who have already gone through that process would rather not sell to you than have to go through that process.

Is that a real problem in your eyes and can you cure it?

Admiral HENN. It is a real problem. It has been a real problem for about two decades. I worked with that real problem for two decades. One of the ways we have avoided that problem, and it is a

new measure we put in, is that we have put out instructions where a professional engineer (PE) can establish a permanency. We have also included that anyone working for ABS on their technical staff can act as equivalents to a PE and approve its equivalence whether it be a fire pump or whatever, and in doing so, can sidestep the whole laborious problem of taking it through Coast Guard-specific approval.

Mr. TAUZIN. Mr. Rook just pointed out the problem with the tonnage definition in the law. Mr. Rook, you are recommending a change in the law, not just in the regulations; I want to point that out.

Admiral, do you have any problem supporting a change in the law such as has been recommended by Mr. Rook in terms of defining OSV vessels?

Admiral HENN. Well, I have some concern, sir. Let me tell you why. First of all, with this particular vessel, the problem started when the owner thought that the OSV general definition applied to any vessel that was being called an OSV. I am looking to the definition in the law that says an OSV, amongst other things, has a five to 500 gross ton limitation on it. So with regard to that, the owner created the problem for himself.

Specifically, to your question, 500 gross tons was picked, one, because that keeps you out of SOLAS, but two, it also represents a particular sized vessel, something in the range of 200, maybe 230 feet at this time. If in fact we are not very careful and tie this international tonnage to the 500 gross tons domestic tonnage, then indeed you could grow a vessel much larger than we have now to 200 or 230 foot maximum length.

Just a rough calculation, if we were going to look at something in 2,000 gross tons, from 500 domestic to 2,000 domestic, you would increase the oil-carrying capacity of a vessel something in the order of about 200,000 gallons.

Recognizing that a major oil spill is defined as 100,000 gallons, we think that is a considerable risk to take.

Mr. TAUZIN. Isn't it possible to limit that if it is not already limited in the law?

Admiral HENN. Yes, sir, I think it is. All I am saying is that I don't have a cookbook answer for you today. We need to take a close look at that.

Mr. TAUZIN. Obviously, the tonnage game is a real problem, though.

Admiral HENN. Yes, sir, absolutely.

Mr. TAUZIN. Finally, Mr. Breau raises the serious concern to the contrary as to whether the IMO regulations such as oceangoing stability regulations should be applied to domestic inland passenger vessels.

Mr. Carman also raised that issue with regard to steamboats, that things go haywire, applying regulations that don't make sense again. We talked about this the other day. When the Coast Guard requires something of someone in the maritime industry that makes no common sense, we run into problems. We have run into them, obviously, here.

Is there any way to deal with this?

Admiral HENN. Yes, sir, there is. We recognize there is a difference between inland operations and full ocean operations. Obviously, I wear both a flag state hat and I can do things domestically with vessels that do not operate on an international voyage that I cannot do on a vessel that requires a SOLAS certificate.

With regard to the structural fire protection requirements, recognize that the requirements for an international cruise ship, you are looking at a large vessel, 600 feet long, carrying maybe anywhere from 2,000 passengers, whatever. On our gambling boats that are 150 to 200 foot feet long, you compress those 2,000 or 3,000 passengers into a very limited space.

So, yes, we have taken the alternative of widening the distance of the structural fire protection bulkheads, but what we have done is even out the equivalent safety by requiring sprinkling systems, smoke removal systems, things like that.

Mr. TAUZIN. I would like you to specifically address-if not now, then perhaps in some written replies-the stability regulation concern. What we are hearing is not only the fire regulation concerns, but the stability regulation concerns for ocean-going vessels that are going to run into 30-foot waves.

It makes no sense when you apply them to an inland waterway vessel that is not going to, under any rational situation, experience that kind of condition, like a meteor striking the earth.

Admiral HENN. Sir, on the damage stability requirements, there are five to six parts of the damage stability. Five of the six parts make sense, whether it is operating on an ocean or on a river. There are parts which we have already discussed with Mr. Carman that don't make sense and we are making moves now to change them.

Mr. TAUZIN. We would deeply appreciate your coming back to us on those.

Admiral HENN. I will, sir.

Mr. TAUZIN. Again, rationalize these regulations.

[The information follows:]

#### DAMAGE STABILITY REQUIREMENTS

The damage stability requirements referred to are found in 46 CFR 171.080 (e). These requirements provide vessels with the capability to stay afloat after being damaged in order to allow time for the passengers and crew to seek safety. Two criteria which seem to be causing the most concern involve the requirement for a positive range of stability for at least 15 degrees beyond the final angle of equilibrium and the minimum righting arm needed when a passenger heeling moment is applied. Although not a problem with many vessels, some hull forms may not easily meet these requirements.

We now have some limited experience in the application of this standard to the design of new vessels. Certain changes in the application of the standard have already been implemented as policy determinations. These technical interpretations were well received by industry at the public meeting on August 5th, 1993. Additional modifications to the requirements will be made. We are moving forward to identify what options are both legally available and technically feasible.

Mr. TAUZIN. Admiral, I want to also express my appreciation to you on behalf of all the people who have testified today. I really believe you are making a great and good-faith effort to work with the committee and to resolve these problems which, at least this member, sincerely feels that there is a lot yet to do in regard to getting a level playing field out there.

If we don't, because of budgetary restraints, have the capacity to continue to meet the foreign competition with subsidy provisions, if we cannot at least level that side of the playing field, at least we ought to make sure that builders and operators in American are not burdened with difficult and more expensive regulations than are our foreign competitors who are allowed in our waters to compete with them.

That is a simple, and I think, a rational way for us to approach this thing.

Secondly, we ought to make sure that regulations, when they are applied to a specific circumstance, make sense. Where you can, I would deeply appreciate your continued work on trying to do that. The smaller shipyards like the one in Loreauville are, you know, going to be at stake. We are going to have a Jurassic Park movie about them one day if we don't somehow begin to address these problems.

Admiral HENN. Sir, we agree with you 100 percent. I believe strongly in the U.S. flag. We will do everything we can to support you in that, sir.

Mr. TAUZIN. Thank you very much.

I recognize Mr. Pickett for questions.

Mr. PICKETT. Thank you, Mr. Chairman, Admiral and gentlemen at the table.

I wanted to touch on several of the items that the chairman has touched on briefly. I would like to start off with this one about the issue of over-regulation. I hear a lot about this from all kinds of business concerns including maritime operators, that they feel like they are being over-regulated, that the standards have been set way beyond what is required to achieve the safety objective or whatever the objective may be.

When you pay the cost to comply with that excessive standard, it doesn't help anybody but it wastes a lot of resources in the process. The fire chief in my city says he considers a fireproof building to be a concrete structure filled with water. He is joking, of course, but we can go to that kind of extreme.

There is a need to do what is essential but not go beyond that in setting up what the regulatory requirements are going to be.

Another thing, Admiral Henn, that I have heard a fair amount about in the construction of vessels is the Coast Guard practice of referring to underwriter-approved or ASME-approved, or what have you, and this seems to create a lot of difficulty for some ship repairers and shipbuilders.

I know that that is a shorthand for saying certain things. But it seems to me that the engineering requirements could be specified and there could be some way to meet those rather than having to buy equipment that has a stamp on it that may or may not suit the purpose for which it is intended.

Now, another thing that I hear quite a bit about is the inability to get a prompt resolution when an issue does come up. If an owner or repair yard wants to substitute something in place of what has been prescribed by the Coast Guard, it takes a long period of time. Time is money. They don't want to tie up the vessels so they go the easy route because they don't have time to mess around with getting the required approval.

I don't know how you solve that problem, but that is very much of a barrier to people wanting to use alternative kinds of equipment and alternative components that you say can be approved, but it all takes time.

The issue about subjective evaluations being made by inspectors where one inspector will look at something and find that it complies, then another inspector comes and looks at the same identical item and decides that it does not comply. Not only do they have different views about what complies and what does not comply, but then the remedy that they prescribe in many cases is quite different.

For example, some inspectors will see some kind of a minor item that can be cured fairly easily by buying and replacing it. But they will say you can't move the vessel until you get this repair completed. That may tie a vessel up, depending on whether it is on a Friday, Saturday or Sunday, it may tie a vessel up for two or three extra days.

Again, I think we need to be very careful about how we treat American vessels because you do put them at a disadvantage when you apply different standards to them. You say, well, they have a right of appeal. Of course they have a right of appeal, but they are worried that the next time around, this inspector not only is going to find one item; he is going to find five items and cite them for those.

Vessels are not perfect, and a lot of things are subject to interpretation. This has a chilling effect on the willingness of owners to appeal the decisions of these inspectors. So I hope that you will watch all this very carefully.

I know I have said a lot, and I suspect we will have to go vote before you have an opportunity to answer, but I would appreciate very much, Admiral Henn, if for the record and any of the other gentlemen around the table who would care to comment on these items, I would like to hear your thoughts, too.

Thank you.

Admiral HENN. If I could respond, I think with regard to the use of consensus standards, when Lieutenant Commander Henn was working for then Rear Admiral Rea who had my job-and I am talking now of going back 20 years or it was Congress who was saying, Coast Guard, why don't you adopt those industry consensus standards such as the ASME code for pleasure vessels, such as Underwriters Laboratories (UL) for noncombustible materials for electrical equipment.

Indeed we have gone a long distance to doing that. So now we are seeing a reversal of people not wanting to, or having some concerns with consensus standards. So I have to tell you that the maritime industry has changed dramatically since the late 1970's until now. Many of the old-timers in contracting, many of the old-timers in construction, things that we thought were secondhand and everybody knew, somewhere in the 1980's, we lost an awful lot of experience and talents. I am talking in our maritime industry. I think that is coming back now. But we lost it.

We are seeing some of the things played back that were good ideas in the 1970's coming from industry and coming from the Congress now being looked at and saying that is a dumb idea. I think

consensus standards are the way to go. The rest of the world is moving that way. We are going with the rest of the world and I think that is a very good way to do it.

With regard to your point about there is a need for equivalence, a fix and getting a quick answer to it. Well, my staff has to work quicker on plan review. I can make that happen. But the other thing we have done is, we have put out the provisions where a professional engineer or anyone working on an ABS technical staff can act as a professional engineer and establish equivalence.

So that is a fix to this. It is a new fix. It has only been out for about six months. We are pushing people to use that. You get automatic plan approval when you do that. The oversight you will use is that if a PE is in fact not doing his job right, we will go to his board and go after his license.

Mr. TAUZIN. Admiral, we are down to six minutes on a vote. The vote is for the Rule on Appropriations for Foreign Operations. We are going to have to suspend operations.

Mr. Lipinski will return in the chair. I want to recognize Mr. Bateman, the Ranking Minority Member of the Merchant Marine Committee.

Mr. Bateman, thank you for being with us. We will continue the hearing right after this vote with Mr. Lipinski in the chair so you can all get a break now.

The Chair declares the committee in recess.

[Recess.]

Mr. PICKETT. [Presiding] Admiral, when we recessed, you were in the process of completing your response. Perhaps you would like to go ahead and complete your response.

Admiral HENN. Thank you, Congressman Lipinski.

The third point that you made was that there comes a time with subjective evaluations when there is a particular problem on a vessel. I note that the subject I have a problem with is common among owners, class societies, surveyors and our inspectors. That is something we need to try and work on all the time.

We try to sort out as much of that as we can in our policy instructions, the navigation vessel inspection circulars. But, sir, I recognize that some owners and some of the shipyards feel that if they challenge an inspector, that there may be retribution, there may be some vindictiveness on the inspector's part.

Let me assure you, each Officer in Charge of Marine Inspection (OCMI), each Commanding Officer (CO) of a Marine Safety Office is well-versed in this. If we find anyone who is being vindictive and he is wearing a Coast Guard uniform, whether it be military or civilian, he will end up being court-martialed, fired, whatever action is deemed necessary. We don't tolerate things like that, sir.

Thank you.

Mr. PICKETT. Admiral Henn, I would say that I visited your training facility there at Yorktown not too long ago and was quite impressed by what I saw there. I think that the Coast Guard does go to great lengths to try to provide uniformity among the people that are trained to do the inspections.

I was voicing to you comments that I had heard. I just thought they should be on the record and you have a chance to respond to them.



Does anyone else care to comment?

Mr. RYNN. Mr. Chairman, if I may, I think there is absolutely no disagreement between our position and Admiral Henn's. It is not the end of arriving to a safe vessel; it is the means that are of paramount concern.

What Admiral Henn has been talking about, and this is why I believe that we are somehow, figuratively speaking, two ships passing in the night, is mechanisms to review to U.S. Coast Guard requirements.

As he discussed, there is the professional engineers route and the ABS's route. Both speed up a process which is, in itself, a problem when anybody is trying to build a vessel. But we are not talking about the same thing. What we are advocating here is the elimination of the duality of regulations and international standards that we face.

Many administrations make vessel classification a condition of registry. In the United States, as far as my information is concerned, there are less than five deep ocean vessels that are not ABS classed. So that means in the entire population, we are talking about a very few people who do not, because of commercial necessity, class with ABS. Some of them are classing with other societies.

We fully respect Admiral Henn's concerns about the organization and its ability to carry out the mission as the administration sees required. Nevertheless, we feel that what we are trying to advocate here is that vessels that are classed and maintained in good order are accepted by the administration as meeting the regulations.

Many administrations who are using classification societies in order to implement conventions such as IMO and SOLAS, and in fact ABS acts on behalf of the Coast Guard in some of those capacities for issuing the safety construction certificates, issue detailed letters of instruction to the class society as to what to apply to vessels being classed to their registry.

So I think that it is extremely important that we realize that what we are talking about here is the duality of the burden of regulations, not the process by which those are implemented.

Thank you.

Mr. PICKETT. Does anyone else care to comment?

Mr. PENTIMONTI. Yes, Mr. Chairman, I would like to make one comment as well in that regard. That is the problem of proving the equivalency that has cost us the most in our new construction differential class for U.S. flag.

For example, making sure that a light fixture meets the requirements, even though there is a process to go to ABS or a professional engineer, is still going to take us tens of thousands of dollars for each item to make sure the item meets those specific stated requirements.

Our foreign competitors, on the other hand, simply base their position on meeting requirements on their purchases through their shipbuilders. There is no equivalency. There is no test. There is no check. They have the ability to go to the open marketplace to select the equipment which is available for installation on their ships.

So, one alternative for us, as Mr. Rynn indicated, would be to set as a condition full compliance with any international standards a statement of what our U.S.-flag requirements are. That would take away much of this burden as we have indicated in the process of making sure that we in fact have safe ships.

Thank you.

Mr. PICKETT. Does anyone else have a comment?

Mr. ROOK. Thank you, Mr. Chairman. I would like to respond.

I stated that in our new building supply vessel, that we desired to create a safer, more effective and efficient vessel. This was our desire. The Admiral stated that we made a mistake in not realizing that this vessel was not an OSV. There is truth to that. We did not realize that the OPA 90 regulations would apply to this vessel but that is not the point.

The point is that we are burdened by unnecessary and inappropriate regulations and, therefore, are unable to build the safer, more efficient vessel that we desire to build and compete in the marketplace. We have to go back, redesign vessels, build them cheaper, less safe for the crew in order to compete.

The objective is, our corporate objective, is a safer vessel which is in direct agreement with the Coast Guard's mandate for safety of life at sea.

Thank you.

Mr. PICKETT. Does anyone else wish to comment?

Mr. CARMAN. Mr. Chairman, earlier I believe it was yourself who raised the point of what is termed consensus approval by ASME, ASTM or Underwriters Laboratories. I did not fully understand the question, I guess, but from our perspective and our point of view in the passenger vessel industry, we think consensus approval by UL, ASME, or ASTM under various land based fire codes is, in fact, an advantage in giving us a wider range of materials to utilize.

So in our particular case, we feel that sort of thing is an advantage and can be effectively utilized to help us.

Mr. PICKETT. Does anyone else care to comment? Admiral?

Admiral HENN. Thank you, Mr. Chairman.

In response to what APL and Sea-Land have said with regard to the ABS and SOLAS requirements, let me point out that even once we take a look at the ABS rules and the SOLAS requirements and then we look at what is needed to build a safe vessel, not only for the vessel itself, but for the officers and crew that sail that vessel, when you get through with all of that and look down the particular list of what is required, you will find that it covers only 50 percent of what is needed.

The reason for that is that SOLAS, in one chapter alone, has 250 places where it says, "You shall do this to the satisfaction of the administration." What does that mean? I pointed out earlier that Admiral Wallace, who was chairman of MEPC, as well as the recently outgoing chairman of the Maritime Safety Committee, have directed all the subcommittees, about 16 in total, within IMO to get rid of those 250 places where it says to the satisfaction of the administration.

We have already gotten rid of those in our U.S. regulations, sir. So I think that part of the industry Coast Guard group that we have formed will be informative to let folks know how far we can

go. And the fact that you are saying, put ABS and SOLAS together and say that covers the whole waterfront, indeed it does not and we need to make that clear.

There are things we can do such as the ABS rules with an addendum that will be extremely helpful, but there is going to have to be some other requirements put in there. When you look at SOLAS for electrical and machine requirements, they are extremely general.

The reverse side of the argument that has been expressed by APL and Sea-Land to us is, for goodness sakes, Coast Guard, tell us what you want in these requirements. We read SOLAS and it doesn't say anything. It gives us some generalities. Tell us specifically what you want so we can cost those things out.

With regard to periodic inspections, there was some mention of dry-docks and underwater surveys. We do that, our requirements are basically the same as the American Bureau of Shipping and basically the same as the International Association of Classification Societies.

The good news is that at the upcoming assembly, the 18th session of the assembly at IMO, there will be two major instruments that go forward, enhanced surveys for tankers and bulkers, and the harmonization of surveys for all classes of vessels.

That will say, basically, you do it the way the United States Coast Guard requires it. Now, it is not going to say that, but the end result will be the same thing. So the rest of the world is being brought up to United States standards.

I have to be a little careful when I say United States standards because, frankly, Mr. Chairman, many of the European countries are at the same level or going even further than we are in those things that they can handle as a flag administration. So, although we are leading the charge, we have the revolution going on in the international maritime communities.

We have to realize the world is changing and that two years down the road, things that we are discussing here about redundancies, things that we are discussing about costing a lot more for a U.S. vessel, that all goes away. Parity is achieved. We have done that with malice and forethought, we, the United States Government, sir.

Thank you.

Mr. STOCKER. Mr. Pickett, let me just very quickly address the issue of consensus standards because that is an issue that has been raised particularly by ship repairers. They are trying to make changes or repairs on equipment, which have been foreign sourced and that equipment may not have been approved by the appropriate U.S. agency.

The problem is in the tension between applying the U.S. standards and/or accepting the international standards which is, of course, what this whole discussion has been about this morning. I think Admiral Henn said something very interesting. What we are really seeing in the next assembly meeting is the adoption of more rigorous standards, particularly as they apply to the inspection of substandard ships.

But as we go on, one of the things that we have to be sensitive to, particularly as repairers are facing a very competitive market-

place and are required to get ships off dock as quickly as possible and back into the hands of the owner, we have to be careful about applying consensus standards that may slow down the process.

Although we would agree, theoretically and ideally, it would be important to adopt those kinds of approaches, what we are simply seeing is there has to be some flexibility in the process.

Mr. RYNN. Mr. Chairman, may I have a brief moment for a follow-on?

Mr. LIPINSKI. [Presiding] You certainly may. That will give me an opportunity to find out where we are, also.

Mr. RYNN. OK. Admiral Henn put forward some very interesting information about the new standards to be evolved here. We are in complete agreement that whatever the standard is, we will definitely comply with it. But going back over the issue, whether it is 50 percent correlation between ABS requirements and classification rules or 60 percent, as we used in our testimony, nevertheless, we have cited over 180 citations where we are both in complete agreement the rules actually cover.

So the burden for us is the fact that we deal here with perceived risk. Mr. Stocker talked about it in the pricing of equipment. We see it all the time. People give us a price including a risk-based premium.

The fact that there are two standards without detailed study, they have no idea whether or not their equipment in fact complies with the Coast Guard requirements. In the two most recent building programs we had outside of the United States which predate our more recent experience, in both of those, we had extensive engineering costs to prove equivalencies.

One was by the former United States line which certainly bore the burden of regulation as much as we do and is no longer in existence. They built 12 ships in Korea. In one area alone, pipe flanges, there was over a three-inch binder created by the shipyard to do a line-by-line comparison with the U.S. Coast Guard standards.

In our prior experience to that back in 1981, we had built a series of 12 vessels in Japan. A similar experience produced almost a two-inch binder. We are talking about hundreds and hundreds of man-hours in these types of activities. If the rules in effect are the same as the regulations, why then must there be two?

Mr. LIPINSKI. Does anybody else want to comment on this area or shall we move on to the next question?

Admiral?

Admiral HENN. Thank you, Mr. Chairman. I think the point that I made before is that not everyone builds to ABS classification, not everyone is going to operate a vessel in international trade. We need the regulations to cover other than just a Sea-Land or APL foreign-built, foreign-operated vessel flying the U.S. flag.

The ABS rules with the addendum will go a long, long way to solving the problem of operators who are going to operate internationally with U.S.-flag vessels. We want to do that. It is extremely important that we do that. But I do not envision doing away with existing Coast Guard regulations because, indeed, they do reflect SOLAS.

They give the specification specificity that is needed by those folks who are not classing with ABS or who are not using the standards for an international trade operation.

Thank you, sir.

Mrs. BENTLEY. Mr. Chairman, would you yield?

Mr. LIPINSKI. I was just going to say that we have been on this question a long time. I was just going to cut it off and move back to Mr. Bateman and then Mrs. Bentley. Mrs. Bentley, if you want to go back to that question when it is your turn, you will certainly be welcome to do so.

The Chair will now recognize Mr. Bateman.

Mr. BATEMAN. Thank you, Mr. Chairman. My apologies to the committee and to the witnesses this morning. With three other places that I was supposed to be, I missed their direct testimony this morning. I have not even been able to go through all of the statements. So I am going to make some general comments and then invite any comments from anybody on the panel if they choose to make any.

I may not have the total recall of all of the circumstances of this, but I want to raise the question concerning the ongoing process by which the Military Sealift Command and I guess it is the Navy Sea Systems Command are weighing procurement of the conversion of some foreign ships for rapid sealift purposes.

I am concerned about the slowness of that process was led to believe that the reason the date for award of contract slipped from April 30 to now, hopefully, July 31, was that all of the shipyards bidding on the work were deficient in meeting engineering and design standards and criteria.

When I started raising questions about that, the principal explanation was that, early on, the Coast Guard had been approached with reference to various safety standards and requirements, and, as I recall it, the Coast Guard took the position that it was not authorized to pre-screen and pre-advise on the subject of this particular procurement and, as a result, whoever went to the American Bureau of Shipping to get their recommendations as to what their safety criteria should be and got them.

And the shipyards built based on that basis and, thereafter, the Coast Guard reviewed the American Bureau of Shipping standards and said that they were not adequate for military sealift carriers and, therefore, the standards changed. This change made everybody's bid out of compliance and they had to go back and rework all of the bids.

Is any of that correct, Admiral Henn?

Admiral HENN. Congressman, I am not aware of that specific problem, but we have dealt with that particular issue. Just a little over a week ago, I met with a group of folks from MARAD, Tom Haller and the folks working with the reflag. We have a number of vessels there, some of which range from being 18 years old to being just a couple of years old.

When we came away from that meeting, things seemed to be fairly well resolved. I was one of the architects of the reflagging navigation and vessel inspection circular back in the early 1980's when we were working very diligently to get the maritime pre-position ships out to Diego Garcia and indeed working with Bethle-

hem Steel with some reflaggings and put that whole NVIC together.

I am not up on the specific concern that you have expressed, but I think having worked with MARAD for over a decade on this particular issue, having sent our folks along with the MARAD representatives along to look at the vessels and actually pick and choose, MARAD picked and chose which ones they were going to go after. We thought we had a good team approach.

I will check and see if there were other glitches. I have not heard of this one, sir.

[The information follows:]

#### CIRCULAR OF REQUIREMENTS

Last fall, we met with the Naval Sea Systems Command (NAVSEA) and American Bureau of Shipping (ABS) to establish roles and responsibilities for the project. By mutual agreement, we decided that ABS would help NAVSEA establish the Circular of Requirements (COR) upon which the shipyard bids would be based and, if ABS had any questions, they were to call the Coast Guard. By January, a number of technical issues surfaced and several meetings were held with all the principals through March to resolve these issues. A major issue involved the carriage of 600,000 gallons of flammable liquids (JP 8) in 86 tank trucks parked in the holds of each of these sealift ships which would also contain live ammunition. The hazards associated with this arrangement went beyond the safety considerations envisioned in our regulations so we proposed that a hazard analysis be conducted. NAVSEA agreed and in mid March contracted for the hazard analysis. On 21 June 93, we spoke with Chris Cable of NAVSEA. He advised the project is on track. NAVSEA said they learned a lot from us during these meetings. Cargo hold safety and other issues slowed the project some, but overall NAVSEA was appreciative of our insight and technical assistance.

Mr. BATEMAN. In a macro dimension, I have heard over the years, since I have been a member of the committee, that our requirements and standards are so far beyond those of the international community that it puts a very severe handicap on American flag carriers and American domestic shipyards in building to those standards. I have heard various quantifications of it.

I have been through Mr. Pentimonti's statement this morning that points to very significant differentials. The other side of the macro dimension of this, I hear of it, our standards are not really more rigid than SOLAS, I am hearing that, but I am also hearing it in the context that SOLAS is more general, it doesn't have the detail and we have to have our regulations to flush out the detail.

Now, is anything being done to get SOLAS modified so that they do supply the detail that would be necessary? Because it seems to me that it puts us in a position where everybody says their standards are equally high, but in the real world where people have to go out and perform and where they have to pay the bill, that the bills are a lot less and the performance a lot less if people say they are doing it under SOLAS.

Good laws and good regulations don't amount to a whole heck of a lot if there is no enforcement of them. I am curious as to what makes that a part of the problem with the disparity between American operators and shipbuilding costs and the costs to the international community. Is it a matter that they don't bother to enforce this even if the regulations performed may be substantially the same as ours?

Those are the kinds of things I get concerned about. One of the things that I get particularly concerned about is whether or not, because of our standards as set out by the Coast Guard and as enforced by the Coast Guard, it is going to impact the decision of U.S. flag carriers as to whether or not they reflag.

Does anybody want to make any comments on any of these observations?

Mr. PENTIMONTI. Yes, Mr. Chairman I would like to talk about the point where the rubber meets the road out there. In the past we have purchased ships from foreign shipyards meeting U.S. standards; and we are now under contract at the same shipyards for the same ships to be flagged foreign, at least as we are currently contracted.

Clearly those contractors can speak intelligently about things that are not perceptions, but are realities, speaking in terms of today's dollars buying those ships. They are showing us there are items, which we identified in our testimony, that make it more costly to buy the U.S. flag ships.

We have given this general testimony. We will be glad to go into more detail for the record, but the dollars per ship are clearly in the \$2.5 to \$3 million range. These do represent, for the most part, the highest cost items, ones that we have talked about consistently on this panel this morning: it is the issue where we need to show equivalency, where we do engineering, analysis, and testing, et cetera, to prove that the material our competitors pick off the global marketplace shelves to put into their ships in fact meets the international standards, do not get accepted by our U.S. Coast Guard until we go through this costly and burdensome regulatory process of showing equivalency.

It is not going to be completely solved by simply speeding up or improving the process for equivalency. There still will be price differences that we will pay for outfitting and building our ships with materials that have global marketplace, international standard acceptance.

Mr. BATEMAN. Could I follow up very briefly on that?

Mr. LIPINSKI. Certainly.

Mr. BATEMAN. Is there any data base that gives us any empirical information as to whether or not under our regulations, our standards, our enforcements, our insistence about equivalency that this safety record of our vessels is significantly better than that of those operated under SOLAS standards?

Are there more accidents, more injuries in terms of operating crew or casualty losses that result in damage to the vessels? Do we have such data?

Admiral HENN. Mr. Congressman, we do keep data on both classification societies and flag states as to particularly the foreign vessels coming into our ports, which ones have the highest deficiencies, which ones have the highest interventions and which countries have the highest detentions.

We have that fear. We don't particularly publish it in the media. But that information is available. Two years ago, 30 foreign flag bulkers were lost. They took down 300 crew with them. There was not a U.S. flag amongst them, sir. These were substandard ships, owned and operated by substandard operators, classed by substand-

ard classification societies and flagged by substandard flagged states.

If they had come to the United States, they would have been detained, sir. It is a shame that that is happening. As a result of that, the Secretary General of the IMO came forward with an extraordinary set of interventions and resolutions at the 17th assembly. These were put in place.

Indeed, at the 18th assembly only two years later, they will go forward as enhanced survey requirements for tankers and bulkers and the harmonized surveys for all of the classes of vessels which will basically bring the surveys, the inspection requirements, in line with today's existing United States Coast Guard regulations.

Mr. BATEMAN. Somewhere in this I think we come to a bottom line that all of this is dedicated to the proposition that we want reasonable safety of personnel and cargos and vessels at sea. We want to do all that is reasonable, all that is necessary.

Therefore, it seems to me that this is an important part of the equation. Are we getting our money's worth in terms of protecting safety at sea?

Mr. LIPINSKI. Thank you, Mr. Bateman.

The Chair now recognizes Mrs. Bentley.

Mrs. BENTLEY. Thank you, Mr. Chairman.

Mr. Chairman, the question I was going to ask earlier I will start with Mr. RYNN. Under what bureau did the ABS lines build their ships and the APL lines build their ships?

Mr. RYNN. Yes, Congresswoman Bentley, they were both built to ABS class.

Mrs. BENTLEY. You say one had 3.5 inches of regulation and the other had 2 inches of regulation?

Mr. RYNN. Well, these were engineering analysis that were 3.5 inches thick to draw a line-by-line equivalency for each part that was required just dealing with pipes. There were similar documents prepared for electrical and machinery and so on.

Mrs. BENTLEY. And to what do you attribute the difference? Were they the Coast Guard requirements?

Mr. RYNN. Yes. It is uniquely, as we were saying before, we have not only the duality of regulations, but as subparts that cause the problem, one of them is restrictive national standards. We have no disagreement with an IEEE convention, an ASTM convention, an AISC. That is not our business.

What we are saying is that when a piece of equipment is offered to us such as a main engine of which there is none built in the United States at all, of necessity, it conforms to the national standard in the country in which it is built. That might be the JIS standard if it came from the orient, the Japanese standard. It might be the DIN standard if it is built in Germany or in Europe.

These standards are internationally recognized standards. The classification societies for many years have been able to understand the standards and establish equivalencies as they carry out there normal class review for a particular design.

Our problem is that in the United States the burden is put upon us, meaning the industry has to delineate what are the equivalencies, what are the points of agreement and disagreement in the regulations. That is a very expensive process. Many of the manu-



facturers, because of this, attach some sort of a risk-based price to their equipment price that they are offering us because they don't know what, if anything, they are going to be required to do somewhere downstream after they have a contract with the ship owner.

Shipowners of necessity, when they purchase a vessel or a piece of equipment, always purchase it subject to full certification of the administration and full classification by the classification society.

So we transfer the burden to the equipment manufacturer. He in turn transfers back to us some additional price increment to cover what he thinks is the risk of that whole process.

Mrs. BENTLEY. Mr. Chairman, one of the reasons that I was not here earlier to hear the panel's introductory statements was that I was appearing before the Agriculture Subcommittee on cargo preference this morning to fight the good fight for American flag shipping.

One of the questions that came up there concerned cost and why is it more expensive on American flag ships than foreign flag ships, et cetera. I pointed out that the Coast Guard regulations concerning manning, for instance, was one of the reasons. I did not go into the additional costs, as required by the Coast Guard, but I will add that to my statement.

These are some of the expenses and items that the industry is getting hit with, let me put it that way, that are not its fault.

Everybody wants to know why we charge \$75 when the foreigners can do it for \$25. Well, what we have been hearing this morning is part of that reason. We need to understand that.

When I was chairman of the Federal Maritime Commission, about two centuries ago, we heard about SOLAS getting up there and all that. Here I am at a hearing again this morning, a century later, that the SOLAS members still have not reached the level of the United States.

Now that really disturbs me, Admiral Henn. When you say two years from now these redundancies we are hearing about today could be changed, this really makes it very difficult for the industry. It makes it very tough that we are making the demands on our people and the foreigners are still allowed to get away with whatever they can get away with.

It really is a burden, and part of the responsibilities of the Coast Guard is to make certain that everybody comes under IMO—it is IMO today, it was IMCO in my time, and also that they start adhering to the SOLAS requirements. I mean, the American operators put in what is required of them in their ships and it is a cost item. These are all cost items.

But if the rest of the world is not going to do it, then I think we have to take some stronger steps about whether we are going to let their ships come into our ports if they are not going to adhere to MARAD international requirements at least.

I think this is an area, Mr. Chairman, that we need to explore because our ships are getting claimed and hit with everything that can be. It is unfair.

Did you mention, Admiral, about 30 foreign bulk ships being lost?

Admiral HENN. Yes, ma'am.

Mrs. BENTLEY. When was this?

Admiral HENN. It has been within the last two or three years.

Mrs. BENTLEY. Over a period of two or three years?

Admiral HENN. That is correct.

Mrs. BENTLEY. I would like to have the names of those ships and what we know about each of the incidents, Mr. Chairman, and have them included in the record.

Mr. LIPINSKI. I think that is an excellent idea. I am sure the Admiral can supply that to us.

Admiral HENN. Mr. Chairman, we will submit that for the record.

[The information may be found at end of hearing.]

Mrs. BENTLEY. One final question now, Mr. Chairman. We have heard this morning with the Coast Guard and the industry that they are going to be meeting over the next year to iron out some differences, et cetera. My question is to both the Coast Guard and Mr. Pentimonti.

When will the operators actually see a financial benefit from these meetings? Will it be two years, one year, three years? I mean, when can they start seeing some results?

Mr. PENTIMONTI. Congresswoman Bentley, thank you for the question. We are hopeful that we will see results, as we have testified, that a great percentage of what we are laying on the table become the agenda. For those meetings, we understand we have basic agreement with the Coast Guard. We are looking for some immediate results, in the most expeditious way in getting those changes made.

We are also hopeful that in the next few months we, in our meetings, can understand where we have differences that we have laid on the table this morning, that we can work through them, as we make purchases of ships. And as you may know, we currently have contracted for six large new container ships that are planned initially as foreign-flag vessels.

We hope we receive a program under which we can operate those ships economically, that we can, in fact, flag them as U.S.-flag vessels. They are under construction.

The gun has gone off and we need to be able to make a decision soon. I think and hope we have, with the industry committee action, made it possible to clean up these differences this year.

Now there are a couple of very significant items we have discussed this morning where we definitely need to get agreement. We need to be able to operate our vessels under the regulations under an internationally-based classification society. I agree with your point.

We need to make sure that these SOLAS and IMO regulations apply to all vessels equally. We are not as concerned about the regulations themselves as much as the implication that we are forced to operate differently as a result of them.

To answer you, we have great expectations that this year we will see these committee meetings have effective results. One way or another, we have to be treated equally, if we are going to compete and register those ships with a U.S. flag.

Mrs. BENTLEY. Mr. Chairman, I ask unanimous consent to submit some additional questions to the panelists.

Mr. LIPINSKI. Without objection, it is so ordered.

Mrs. BENTLEY. Thank you, Mr. Chairman.

Mr. LIPINSKI. Thank you, Mrs. Bentley.

Mr. Bateman, do you have any further questions?

I want to personally thank this panel for being here this morning and this afternoon. It was a little bit disjointed, the hearing, because of a vote we had. It seemed like everyone on both committees had some other meetings to attend to. I had to go over to Public Works for a while and vote not to be able to smoke here any longer.

I appreciate your attendance here. Your testimonies were very interesting in an interesting and difficult area. It is one that I intend to pursue to try to come to a meeting of the minds which will be ultimately advantageous to the American merchant marine industry.

I thank you very much. This hearing is adjourned.

[Whereupon, at 12:20 p.m., the joint subcommittees were adjourned; and the following was submitted for the record:]

US Department  
of Transportation  
**United States  
Coast Guard**



Commandant  
United States Coast Guard

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DEPARTMENT OF TRANSPORTATION

U.S. COAST GUARD

STATEMENT OF ADMIRAL ARTHUR E. HENN

ON DOMESTIC AND INTERNATIONAL VESSEL CONSTRUCTION STANDARDS

BEFORE THE

SUBCOMMITTEE ON COAST GUARD AND NAVIGATION

COMMITTEE ON MERCHANT MARINE AND FISHERIES

UNITED STATES HOUSE OF REPRESENTATIVES

JUNE 17, 1993



**Rear Admiral A. E. "Gene" Henn  
Chief, Office of Marine Safety, Security  
and Environmental Protection  
United States Coast Guard**



Rear Admiral Arthur Eugene Henn became Chief, Office of Marine Safety, Security and Environmental Protection at Coast Guard Headquarters, Washington, D.C., in June 1991. Prior to this assignment, Rear Admiral Henn was Commander of the Maintenance and Logistics Command, Atlantic.

Earlier assignments included that of Operations and Engineering Officer on the Coast Guard cutter Chincoteague; Assistant Chief, Merchant Marine Technical Branch, New Orleans, LA; and Special Project Action Officer, Merchant Marine Technical Division, Coast Guard Headquarters.

He was also Marine Inspector and Senior Investigating Officer, Marine Inspection Office, Philadelphia, PA; Chief, Engineering Branch and Chief, Marine Technical and Hazardous Materials Division, Coast Guard Headquarters; Captain of the Port, New York; Commander, Group, New York; Commander, Subsector, New York, Maritime Defense Zone, Atlantic; and Chief, Operations Division and Chief of Staff, Eighth Coast Guard District, New Orleans, LA.

A 1962 graduate of the Coast Guard Academy, Rear Admiral Henn earned combined master of science degrees in naval architecture, marine engineering and metallurgical engineering from the University of Michigan in 1968. Also, he is a 1982 graduate of the Army War College.

His decorations include the Legion of Merit, two Meritorious Service Medals, four Coast Guard Commendation Ribbons, Coast Guard Unit Commendation Ribbon, Coast Guard Achievement Medal and two Commandant's Letter of Commendation Ribbons.

Rear Admiral Henn is a member of the American Society of Naval Engineers, American Bureau of Shipping, International Cargo Gear Bureau, Marine Index Bureau, Marine Engineering Council of Underwriters Laboratories and the Sealift Committee of the National Defense Transportation Association.

During the past 20 years, he has represented the United States Coast Guard as a member of delegations to the International Maritime Organization, a United Nations specialized agency. He heads United States delegations to meetings of the Maritime Safety and Marine Environment Protection Committees of IMO.

A native of Cincinnati, Ohio, Rear Admiral Henn is married to the former Susan Frances Pedretti, also from Cincinnati. They have two grown children, David and Jennifer.

DEPARTMENT OF TRANSPORTATION  
U. S. COAST GUARD  
STATEMENT OF REAR ADMIRAL ARTHUR E. HENN  
ON DOMESTIC AND INTERNATIONAL  
VESSEL CONSTRUCTION STANDARDS  
BEFORE THE  
SUBCOMMITTEE ON COAST GUARD AND NAVIGATION  
COMMITTEE ON MERCHANT MARINE AND FISHERIES  
UNITED STATES HOUSE OF REPRESENTATIVES  
JUNE 17, 1993

Thank you, Mr. Chairman. I am grateful for the opportunity to meet with you and provide you an updated overview of the Coast Guard's role in the development and enforcement of vessel construction standards.

BACKGROUND

As you know, the Coast Guard has a long history of active involvement with various national and international standards-making committees, and we have successfully ensured that safety has been retained as a key element of the standards-making process. Our participation in the development of shipboard standards began over 20 years ago with our membership on the American Society of Mechanical Engineers (ASME) committees on power boilers and pressure vessels. Since then, as a result of the continued growth in our Congressionally-mandated responsibilities, our sphere of interest and involvement has expanded to encompass more than 60 different standards-making bodies, including Federal advisory committees, national industry professional societies, classification society technical committees, committees in support of international treaties and agreements, and the major international industry standards

organizations. More recently, as our responsibilities with regard to protection of the environment have increased, we have also become active in the development of standards for specialized oil spill removal equipment, vapor recovery during cargo oil transfer, and the reduction of engine exhaust emissions. With respect to shipboard construction standards alone, we currently have over 30 people assigned as either primary or alternate members on over 50 committees or organizations devoted to the development, implementation, and oversight of voluntary consensus vessel construction and operation standards.

In the historical evolution of shipboard construction standards, each flag state initially developed and implemented its own standards. The International Maritime Organization (IMO) then became the forum for establishing international safety standards which, ideally, all member states ratify and implement. This process helps create a level playing field among the maritime industry's of the member flag states; however, complete parity has yet to be achieved.

#### COMPETITIVENESS, COST, AND CONSTRUCTION STANDARDS

Studies conducted and cited by the U.S. maritime industry have shown that the industries competitiveness has been adversely impacted by the cost differential between building a vessel to U.S. standards and building it to some foreign standards; that differential has been reported to be anywhere from 3% to 15% of

the total construction cost. These studies, however, were conducted prior to implementation of the 1981 and 1983 amendments to the 1974 Safety of Life at Sea (SOLAS) Convention. The Convention and its amendments have greatly reduced the gap between U.S. and international standards.

Admittedly, the United States has unilaterally imposed more stringent standards than the international regulations promulgated by IMO. However, these were not discretionary requirements -- they were imposed with congressional support and direction because of their importance to safety. Two examples are the upgraded steering requirements of the Port and Tanker Safety Act of 1978, and the double hull requirements of the Oil Pollution Act of 1990. Nevertheless, a Maritime Administration (MARAD)-sponsored study conducted in 1979 reported that the portion of the total construction cost differential directly attributable to discretionary requirements imposed by the Coast Guard was less than one-half of one percent.

Adopting SOLAS requirements as the sole standards for vessel construction has been suggested by some; however, this is not the panacea it may appear to be. SOLAS provides good general guidelines for vessel design, but it's not a comprehensive construction standard. SOLAS does not adequately address all vital safety systems and is fraught with hundreds of provisions which leave design details to the satisfaction of the flag state. For example, a recent Coast Guard technical review of an



alternative sprinkler system submitted by a foreign manufacturer determined that the system did not afford the safety provided by automatic sprinkler systems. This system had been approved by a foreign flag administration and classification society, but U.S. Coast Guard review of the proposed system revealed several technical problems. Such unproven systems should not be substituted where lives are at risk. While the United States supports and endorses the flexibility allowed by the equivalency provision of SOLAS, we also uphold requirements for passenger safety. The United States will continue to challenge foreign manufacturers, administrations, and classification societies that have a detrimental impact on critical safety systems.

The Coast Guard is leading efforts within several technical subcommittees of IMO's Maritime Safety Committee to broaden the scope and increase the specificity of the various IMO codes and conventions. Topics addressed by current initiatives include safe ship design, construction, and operation, as well as vessel manning standards. One representative project involves the elimination of the "to the satisfaction of the Administration (flag state)" clauses from SOLAS provisions, and the introduction of objective, definitive acceptance criteria. Coast Guard initiatives to improve international standards will provide increased opportunities for levelling U.S. and foreign ship design, construction, and operation standards.

An important factor that has not been addressed directly in the cost studies is the apparent widespread misunderstanding of our regulations, specifically provisions for accepting foreign materials, equipment and arrangements which are shown to be equivalent to those meeting our standards. Provisions for acceptance based upon demonstrated equivalence have always been available to designers and builders and have been frequently employed. The significance of this was pointed out in an industry follow-up study to one of the aforementioned cost studies, wherein certain "premiums" charged by a foreign shipyard for acquiring materials or equipment meeting our requirements were identified and virtually eliminated through use of the equivalency provisions in the regulations. While this is an example of a partial solution, it falls short of resolving the problem for all cases because the equivalencies are typically done on a case by case basis, and the Coast Guard is obligated to treat the comparison documentation submitted by the designer or builder as proprietary information. As yet, there has been no sustained drive within the industry to pool information, knowledge, and resources to address this. As a follow-on to the Shipbuilders Council of America standards comparison project, North American Steel Ship Company (NASSCO) was recently awarded a National Ship Research Program contract to identify standards which the industry believes would help reduce ship construction costs. We will maintain close contact with NASSCO throughout this effort to ensure the establishment of proper safety criteria.

In the summer of 1992, the Coast Guard conducted a limited comparison of ship design and construction standards between the Code of Federal Register (CFR), and a combination of SOLAS and American Bureau of Shipping (ABS) Rules. The preliminary results showed that a combination of SOLAS and ABS Rules would provide a safety level equivalent to CFR requirements for about half the standards that we reviewed. These results have not been formally published or released. The Maritime Regulatory Reform staff has initiated a formal follow-up of these results.

Our activity with international organizations allows us to share maritime-related information and provides a vehicle for helping shape the future development of safety standards of the worldwide maritime community. Through our continued involvement with various professional society committees, we initiate, develop, evaluate and accept performance-based industry consensus standards in lieu of restrictive federal regulations. This has the following advantages: the standards are familiar to industry, reduces the time necessary to complete the USCG review and acceptance process, and ensures that USCG safety requirements keep pace with the latest industry technology and developments.

The Coast Guard has long been active in standards making organizations. Initial involvements were in the domestic arena with professional societies such as ASME and the American Society for Testing and Materials (ASTM). The Coast Guard is active

internationally as the U.S. representative to the IMO. We participate on two committees, 11 subcommittees, and are typically involved in numerous intercessional correspondence groups. Recent international activity has accelerated interest in making the International Organization of Standards (ISO) and the International Electrotechnical Commission (IEC), the two central bodies for all international industry standards. The United States endorses this and participates at ISO and IEC through close correspondence with and membership on technical advisory groups sponsored through the American National Standards Institute. The international organizations remain the prime focal point for all of our standards efforts to guarantee the uniformity of application worldwide and to minimize burdens imposed on our maritime industry.

#### RECENT INITIATIVES

##### Damage Stability

New Coast Guard damage stability regulations for dry cargo ships were recently issued (April 1, 1993). These conformed applicable U.S. regulations with international standards. In addition, the Coast Guard published a notice in the Federal Register (April 2, 1992) that allows a draft IMO intact stability standard for large container ships to be submitted as an equivalent to U.S. requirements for intact stability for container ships greater than 100 meters. The combined effect of these changes will be an average increase of three to eight percent in ship cargo-carrying capacity. The new regulations

removed an economic disadvantage to U.S. carriers and will result in a projected annual benefit as high as \$250 million due to the ability to carry additional cargo. The Coast Guard has also begun work on a U.S. proposal to standardize damage stability requirements. Standardization will develop a single probabilistic damage stability method for all ship types. SOLAS regulation 25-1, implemented by this rule, specifically excludes application to ships which are shown to comply with subdivision and damage stability requirements of other international standards. Therefore, offshore supply vessels (OSVs) that comply with the Guidelines for the Design and Construction of OSVs are not required to comply with these rules. A separate rulemaking has already been proposed (CGD 82-004 and 86-074) which will obviate the need for these vessels to comply with the damage stability rules for dry cargo vessels. The Coast Guard does not intend to apply the dry cargo rules to OSVs while the two aforementioned rulemakings are pending.

#### Design of HSC Code.

The Coast Guard has also taken the lead at IMO in developing an international code for the design of high speed passenger and cargo craft (HSC) code to replace the current dynamically supported craft (DSC) code. The DSC allows latitude in interpreting the code "to the satisfaction of the flag administration's" specifications. The new HSC code will be specific, yet will permit performance requirements to be met using different approaches. This serves shipbuilders' needs for

design flexibility, and meets the increasing world-wide demand for faster transportation of people and cargo. High speed passenger and cargo vessels include small waterplane area twin hull (SWATH) craft, wave-piercing catamarans, air cushioned vehicles, and other novel designs. The Coast Guard has supported development of the HSC code in order to put domestic shipbuilders on an equal footing with overseas shipbuilders. The HSC code is expected to be completed next year.

#### Plastic Pipe Testing Procedures

The IMO recently adopted new plastic pipe testing procedures. The United States led the effort to develop these procedures for use of plastic pipe aboard ships. Domestic manufacturing companies and standards-making groups aided significantly in the development effort. The use of plastic pipe in many shipboard piping systems offers shipbuilders a substantial savings in both procurement and installation costs. The United States immediately implemented the international standard for use in piping systems, including automatic sprinkler systems. Such efforts make U.S. construction more competitive with foreign shipyards without compromising safety.

#### Use of Fiberglass in Vessel Construction

The Coast Guard has initiated a research program to develop a standard for assuring the fire safety of fiberglass structures. Because of fiberglass' unique flammability and heat sensitivity, current regulations limit its use in shipboard construction to

vessels carrying less than 150 passengers. For a number of technical reasons, it would be desirable to use fiberglass in the construction of vessels that carry 150 or more passengers. Unfortunately, a method has not yet been developed by which fiberglass can be reliably protected against the risk of fire. Earlier this year the Coast Guard completed the first phase of research into this issue. Research will continue as funding permits. In the meantime, we are working closely with shipyards on concepts that will provide adequate protection. For example, we recently approved, in concept, a combination fiberglass and aluminum design having numerous additional fire safety features. Additional testing of fire suppression systems to determine their effectiveness on fiberglass is scheduled for later this year.

#### OCCASIONAL NEED FOR UNILATERAL ACTION

Often we are presented with novel designs which were not envisioned by the regulations, but which cannot wait for time to secure international consensus and adoption of standards. In such cases, we develop unilateral positions to provide industry a reasonable response time. Then we take the issue to the IMO for international agreement.

#### Hatchless "Open-Top" Container Holds

As one example where unilateral development of interim standards was needed, U.S. shipping is now converting to hatchless "open-top" container hold designs. "Open-top" ships offer tremendous savings to maritime shipping on short voyages by reducing time

spent at the pier. Coast Guard engineers worked closely with Matson Shipping Co. engineers and other U.S. container ship companies to determine the fire hazards posed by carrying certain types of cargo in open-top cargo holds. Working together, we developed a proposed standard and will present it at IMO to ensure that equivalent measures of safety are applied by all countries. To date, four U.S. ships are being modified or are scheduled for this economical modification. The approach of determining the hazards and conducting a fire risk assessment was also used by the Coast Guard in reviewing the strategic sealift fire safety systems where existing regulations did not adequately address the hazards.

#### Excursion, Dinner, and Gambling Industry Vessels

Another example is the Coast Guard's development of comprehensive alternative design requirements for domestic vessels in the excursion, dinner and casino industry which operate on protected and partially protected routes. Dinner, excursion and gambling trade vessels differ significantly from the traditional ocean-going passenger vessels covered by existing regulations. These vessels being built today are designed with only large spaces for passenger occupancy. This results in higher passenger densities and requires special consideration. The Coast Guard has responded to the designers, builders and owners of this new generation of passenger vessels by developing innovative design and passenger safety system requirements that enhance safety while meeting the industry's needs. The Coast Guard has also led



recent efforts to develop an equivalent alternative method to permit longer and larger public spaces to be used, beyond that allowed by current regulations. The rapid growth rate in this industry is expected to continue and the design advantages offered by the Coast Guard will allow shipbuilders and designers to use numerous performance-based alternatives rather than specifications having narrow scope. The Coast Guard will continue to work with designers, owners and shipyards to satisfy our safety concerns and avoid placing undue burdens on industry.

#### Use of Alternative Fuels

Another example is the use of alternative fuels, an option which has been driven largely by increasingly strict air pollution standards and Federal Government monetary incentives. During the past two years, we conducted concept reviews of two separate projects involving compressed natural gas (CNG) fueled engines: one for a passenger ferry conversion, the other for a new crew boat. No Coast Guard regulations currently address CNG or other alternative fuels. Our primary safety concern was the cylinders needed to store the gas at extremely high pressure, presenting a fire/explosion hazard to the passengers and crew. The operational concern was the weight imposed by use of conventional steel cylinders. In the absence of existing standards for non-steel cylinders, and by working closely with leading industry experts, we were able to approve the use of lightweight fiberglass wrapped aluminum cylinders.

### Submersible Vessels

The Coast Guard has also recognized the rapid growth of the emerging passenger carrying submersibles industry. We have allowed growth without jeopardizing the safety of passengers. There are no specific regulations for passenger carrying submersibles. However, we have combined industry standards and existing classification society rules to achieve an extremely well defined baseline for the certification of these vessels. These guidelines have been incorporated into a recently completed Navigation and Vessel Inspection Circular (NVIC) which defines the design and construction characteristics that would provide a level of safety equivalent to that provided by surface vessels. This submersible shipbuilding effort was made possible by our teaming with industry experts and classification societies to develop appropriate guidelines for each new design. This has allowed us to maintain high safety standards while allowing continued growth in our domestic industry.

### Automatic Sprinkler Systems

In the past several years, vessel designs have become more and more dependent on the installation of automatic sprinkler systems to ensure the safety of both passengers and cargo. Our sprinkler system regulations are very specific and do not permit designers to take advantage of significant technological advancements. Recognizing this opportunity to improve both safety and economic feasibility, the Coast Guard has taken the initiative to adopt and modify established industry standards, which were developed

by the National Fire Protection Association (NFPA). The Coast Guard has prepared guidance to shipbuilders and designers in the form of a NVIC that allows the application of specific NFPA standards with the necessary modifications applicable to shipboard installations. The Coast Guard also plans to work with NFPA to develop a marine automatic sprinkler standard that can be adopted into regulation.

#### STANDARDS FOR THE CRUISE SHIP INDUSTRY

The cruise ship building boom, which started in the 1980's, is projected to continue throughout the 1990's. The Coast Guard has increased our verification of the safety of foreign ships operating from U.S. ports. In addition, in 1992 the United States led the IMO in the development and adoption of, for passenger ships, two sets of SOLAS fire safety amendments. The first was adopted in May 1992, and is applicable to all existing passenger ships worldwide. The second, adopted in December 1992, is applicable to every passenger ship built after October 1, 1994. Key requirements are identical; all passenger ships will have to install, during initial construction or retroactively, the latest fire safety features applicable to a modern hotel. These include automatic sprinkler systems, smoke detection systems, improved methods for monitoring and reacting to a fire, and improved means to guide and protect passengers escaping to safe areas. As all existing ships sailing on international voyages will ultimately have to meet the latest fire safety requirements for new ships, 'grandfathering' will no longer

create an incentive to retain ships built to outdated standards. Rather these new international regulations will ensure higher minimum standards for the remaining older ships. This meets our objective of equalizing safety requirements internationally.

In the past few years, passenger vessel damage stability criteria have come to the forefront in safety standards development. Ten years ago, the Coast Guard recognized that our domestic regulations and the equivalent criteria in the international convention had become inadequate as a result of the changes that had taken place in vessel hull design. Because the Coast Guard advocates the development and adoption of international standards for all U.S. vessels, we initiated, at IMO, revised damage stability criteria for passenger vessels. In 1988, after much discussion and work, IMO adopted a new set of damage stability requirements for new passenger vessels.

#### STANDARDS FOR THE DOMESTIC FLEET

##### Damage Stability

After IMO approved new damage stability criteria, we began an examination of our domestic fleet to ensure that domestically operated vessels have at least an equivalent level of safety to U.S. vessels in international trade. Unlike other vessel types, our domestic passenger ships carry anywhere from 7 to 4,000 people on a single voyage. Hence, a single casualty could result in significant loss of life. For example, damage instability contributed to the loss of 193 lives on March 6, 1987, when the

Herald of Free Enterprise sank in shallow water off the coast of Belgium. Domestically, we have been extremely fortunate to have avoided incidents attributable to the deficiencies that existed in our damage stability regulations.

To check the applicability of the international requirements, the Coast Guard initiated a study on the ability of the major vessel designs that make up our domestic passenger vessel fleet to meet the new international requirements. As a result of this study, we proposed that the requirements be placed only on what are called Subchapter H and Subchapter T passenger vessels. Generally, these are U.S. passenger vessels of 100 gross tons or greater, and those passenger vessels of less than 100 gross tons but greater than 65 feet in length. After very few public comments were received on this issue, these requirements were made final in December 1992. Since that time, we have learned of certain types of vessels, mainly those operating in protected or partially protected waters, which have problems adapting their designs to the new regulations. As a result, we are working with naval architects to develop new standards that establish an equivalent level of safety. A public hearing is scheduled for the summer of 1993 to discuss a permanent solution to this problem.

The other major change in our domestic stability regulations is the proposed periodic stability determination that also was initiated from the completion of work done at the IMO for

passenger ships and for mobile offshore drilling units. The tendency for ships of all types to experience "weight gain" with age is an accepted fact, both domestically and internationally. Incorrect light ship data can result in substantial miscalculation of a vessel's intact and damage stability, especially for vessels in which light ship forms a major part of the full load. Coast Guard inspectors occasionally require a new stability test after noticing that a vessel's operating draft has increased significantly. However, this type of corrective action is cursory at best and only attacks the symptoms of the problem. Stability tests have demonstrated that even the most conscientious operator is often unable to keep track of all changes to a vessel's stability.

The proposed expanded U.S. periodic stability verification requirement is based on knowledge gained about weight growth and the necessity to monitor it in all vulnerable vessel types. Generally, the new U.S. regulation requires a deadweight survey every five years with a full inclining required only when a significant amount of undocumented weight growth is found. The proposed periodic lightweight verification regulations would affect an estimated 2,500 vessels (about 1,300 passenger vessels, 100 Mobile Offshore Drilling Units, 1,100 small cargo vessels).

During the proposed rules comment period, the Coast Guard received letters from 28 firms and individuals representing affected sectors of the marine industry. All of the comments

were addressed in the final rule. However, as the rule implementation time neared, industry raised new concerns on the applicability of the rule and the cost of its implementation to the various vessel types. As a result, the Coast Guard has indefinitely delayed implementation. The comment period will be reopened and a public hearing held on these new concerns. Our future actions will be based on the industry input via the public hearing and any additional written comments.

#### IMPORTANCE OF ENFORCEMENT

Enforcement of vessel construction standards is as important as their detailed and uniform development. I view enforcement as the natural result of all parties recognizing and fulfilling their respective responsibilities in ensuring maritime safety. The enforcement consists of what I call the five safety nets: (1) the owners and operators, (2) the classification societies, (3) the flag state administration, (4) the insurance companies and Protection and Indemnity (P&I) clubs, and (5) the port state.

In support of this concept, the Coast Guard has spearheaded efforts, both domestically and internationally, to recognize quality organizations and place greater emphasis on the responsibilities of vessel owners and operators and equipment manufacturers. The Coast Guard actively supports improving overall maritime safety, by the following: promoting International Standard for Quality System (ISO 9000) and the "model company" concept; endorsing manufacturer self-

certification of products complying with adopted industry consensus standards; defining internationally the term "recognized classification society;" increasing port state control; re-emphasizing flag state enforcement; and supporting the full use of international standards organizations. These efforts lead to effective use of scarce resources in the development and oversight of standards, and provide the opportunity for components of industry to help themselves become self-policing, quality organizations. These efforts also reflect and support the same general attitude and trends in the maritime community worldwide. Thank you, Mr. Chairman. I would be pleased to answer any questions.



JOINT TESTIMONY OF

EUGENE K. PENTIMONTI

Vice President For Government Services  
American President Lines, Ltd.

and

HUGH STEPHEN RYNN

Director, Fleet Engineering  
Sea-Land Service, Inc.

On Behalf of  
American President Lines, Ltd.  
Sea-Land Service, Inc.  
and the  
American Institute of Merchant Shipping

Regarding

THE ADVERSE IMPACT OF U.S. COAST GUARD STANDARDS  
ON THE INTERNATIONAL COMPETITIVENESS  
OF  
UNITED STATES-FLAG LINER VESSELS

before the

MERCHANT MARINE & COAST GUARD SUBCOMMITTEES  
COMMITTEE ON MERCHANT MARINE & FISHERIES  
UNITED STATES HOUSE OF REPRESENTATIVES

Washington, D.C.  
June 17, 1993

Good Morning. We are Gene Pentimonti, Vice President of Government Services for American President Lines, and Hugh Rynn, Director of Fleet Engineering for Sea-Land Service. We thank you for this opportunity to present APL's and Sea-Land's perspectives on a problem that is reducing the international competitiveness of the American merchant marine: duplicative and excessive U.S. Coast Guard requirements for vessel design, equipment, maintenance and inspection which are imposed on U.S.-flag vessels, but which are not applicable to their foreign-flag competitors. We seek relief from this costly regulatory burden, so that U.S.-flag operations can compete on a level playing field with foreign-flag operations. We are pleased that the American Institute of Merchant Shipping has joined our companies in this statement.

#### **Background and Need**

In ocean shipping many standards regarding vessel design, equipment, maintenance, operation, and inspection are established in international agreements to which the United States is a party. Vessels flying the flag of one nation are accepted at the ports of other nations, including the United States, if the vessels meet those international standards.

However, numerous additional requirements have been developed by the Coast Guard for application only to U.S.-flag vessels. In short, the U.S. Government fully accepts as safe foreign-flag vessels which call at U.S. ports so long as they meet

international standards. Yet, when implementing those standards for U.S.-flag vessels, the Coast Guard imposes additional, costly, and unnecessary requirements.

These additional standards reduce the cost competitiveness of U.S.-flag ships wherever they compete with foreign-flag vessels. These requirements not only add to the cost of initial construction of a U.S.-flag vessel (no matter where in the world it is built), but add costs to maintaining the vessel.

American President Lines and Sea-Land Service are fully committed to vessel safety (and safety generally). The success of our services depends on reliability. Strong safety programs are critical to providing reliable vessel service to our customers, as well as meeting our responsibilities to our employees. From our experience, which includes operating foreign-flag as well as U.S.-flag vessels, we know that international standards and norms are safe. They would be sufficient for U.S.-flag vessels. That is why we strongly object to the perpetuation of regulations which seriously diminish the international competitiveness of U.S.-flag liner vessels and contribute to the decline of the United States-flag merchant marine.

In asking for removal of this significant extra layer of regulation burdening U.S.-flag operations, the companies wish to make clear that they understand that creation of those regulations years ago may have made sense then. Decades ago the international maritime community was less regulated and international standards for

safety were not as comprehensive as they are today. In that era, requirements unilaterally developed by the U.S. Government arguably met a safety purpose. Further, in that era of less intense international competition, with the U.S. flag dominating the waves, the disadvantage which additional U.S. regulations imposed on U.S.-flag carriers was not as readily apparent.

Today, however, the U.S. flag represents just a small fraction of the world's fleet. The fleets competing with U.S.-flag vessels are large, efficient, and safe -- but cost less to build and operate in part because the safety standards which they must meet are more reasonable than the ones which our government applies only to U.S.-flag vessels. So, in this changed international environment, there is absolutely no reason for continuing to needlessly burden U.S.-flag operations. The U.S. Government must change its regulations to eliminate the significant cost disadvantages which they impose on our companies, as well as on other U.S.-flag containership operators.

Because the need for change is critical, in the last two years our two companies have pressed harder than before for appropriate regulatory relief. Recently, and in response to our efforts, we have seen increased awareness and willingness to help in the Executive Branch. Coast Guard officials have informally advised us that partial change could be coming within a year. While this is encouraging, we don't consider our industry to be on the threshold of full resolution of these problems

administratively. We are still uncertain both as to the scope of the response and its speed. Thus, while we look forward to continuing to work with the Coast Guard, we also welcome this opportunity to describe this problem to the Congress.

#### The Types of Burdens Faced by U.S.-Flag Operators

The regulations of concern to us take the form of vessel design, equipment, maintenance, and inspection requirements which exceed international norms. They burden U.S.-flag vessels in a variety of ways -- all of which increase the cost of doing business for the U.S.-flag operator with no meaningful, if any, improvement of safety. Such burdens include:

- Regulations which are redundant to classification society rules or which require duplicate inspections by the Coast Guard and classification societies;
- Regulations which create unique Americanized versions of widely recognized international vessel standards, essentially implementing an international standard in a manner that is more burdensome and costly for a U.S.-flag vessel than one of another flag; and

- Regulations which incorporate restrictive national code standards in what is truly an international industry.

These requirements all impose greater costs upon U.S.-flag vessels than international standards impose on the foreign-flag vessels which compete against them, often in our own ports. Not only are additional requirements themselves a problem, but the added complexity creates time consuming administrative burdens for us which operators of solely foreign-flag vessels do not face. And we reiterate, we are committed to safety, but see no safety justification for continuing these burdensome requirements. Further, providing the relief we seek would not be in any way inconsistent with the Oil Pollution Act of 1990, in which the Congress decided that, in some instances, certain vessels carrying oil in bulk would be regulated in certain ways regardless of international practice.

#### The Role of Classification Societies

In considering how to solve this problem of excessive regulation of U.S.-flag vessels, it is important to keep in mind the role of classification societies as certifiers of vessel safety. Most, if not all, containership owners class their vessels with international marine organizations called classification societies. These societies act as independent agencies, certifying to all interested parties (governmental agencies, insurance underwriters, financial institutions, prospective charterers, etc.) that a

vessel is fit for its intended service. One of the world's leading classification societies is the American Bureau of Shipping (ABS), which serves the United States, other national governments and the marine industry admirably in many ways. Among its tasks, it acts on behalf of the United States Government in validating the strength of a vessel, and predicated on this and other requirements, issues a Loadline Certificate on behalf of the U.S. Government.

In order to be classed in the first instance, a vessel must be designed in accordance with society rules which are more comprehensive than current Coast Guard regulations. All phases of building are inspected by the societies. To maintain vessels in "class", shipowners must submit their vessels for periodic inspections (referred to as "surveys") pursuant to internationally accepted norms. These inspections assure that vessels are properly maintained and safe for continued operation. In the case of ABS, the society's rules are promulgated through a standing technical committee on which the Coast Guard and MARAD, as well as the marine community at large, are represented. So, ABS, like the world's other leading classification societies, is a thorough and technically competent organization. Indeed, most of the world's governments rely on classification societies to a far greater degree than does the United States. The United States is widely recognized as the nation which relies least on classification societies to certify vessel safety. The Coast Guard duplicates ABS inspections, adds requirements, and limits its delegations to classification societies more than other nations.

And the fact that the Coast Guard conducts inspections does not relieve the U.S.-flag vessel operator of classification society inspections. For society inspection is the international standard of seaworthiness relied upon by insurers, lenders and others with whom we must do business. So, the U.S.-flag operator faces double inspection as well as requirements beyond international norms.

#### **How Unequal Standards Hurt The Competitiveness of U.S.-Flag Vessels -- Every Year**

The need to reform these regulations is not merely an academic exercise. These regulations cost the U.S.-flag operator dearly at every stage of a vessel's life.

First, these rules impose extra costs when a vessel is constructed. Due to design or equipment standards, a vessel built to U.S.-flag standards will cost more to build than an otherwise identical vessel built to foreign standards in the same shipyard. Because our vessels are privately financed, the lifetime costs are even greater. APL and Sea-Land estimate this cost to be from five to eight percent of the total cost of the vessel. We understand that the Coast Guard estimates it to be between one and five percent. With the cost of modern oceangoing vessels approaching \$100 million each, building to U.S. standards adds at least \$1-8 million to the cost of the ship, plus interest on the difference.



Second, during the life of the vessel, the costs of certain uniquely U.S. equipment and inspection standards also greatly handicap our efforts to carry the U.S. flag in international competition. One important example concerns hull inspections. While waivers are available under certain circumstances, Coast Guard regulations require certain inspections of the underwater hull to be done in drydock at every inspection interval rather than on alternate inspections. In comparison, foreign-flag vessels allowed to use U.S. ports are generally permitted to have alternate inspections done by underwater camera. The consequences of not receiving a waiver are very costly -- \$300-\$600,000 every five years per vessel just for drydocking costs -- compared to \$50,000 for underwater inspection -- not counting the opportunity cost of not having that vessel in service while it is in drydock. So, on an annualized basis, depending on the cost of drydocking, this is a burden of \$50-\$100,000 per vessel per year -- a very significant cost which is not warranted.

In particular, with today's improved underwater hull coatings, these inspections are reliably carried out by teams of divers operating remote video cameras. The cameras project the image to on deck monitors for viewing by the classification society surveyor of record. While foreign-flag vessels competing with our U.S.-flag vessels utilize this approach -- and reasonably so -- it is not readily available to U.S.-flag operators under present Coast Guard regulations.

In contrast to the Coast Guard's regulations on this issue (46 CFR § 91.40-3 and NVIC Circular No. 1-89), the ABS rules, which are typical of the standard for a foreign-flag operator, allow underwater survey in lieu of drydocking for all vessels unless "there is a record or indication of abnormal deterioration or damage to underwater body, rudder, or propeller." This is a much more reasonable standard, correlating the intensity of survey with the condition of the vessel.

The U.S.-flag owner is at a further disadvantage in that the Coast Guard requires that any survey/inspection of the underwater hull, whether in drydock or by camera, be carried out in the presence of a Coast Guard Inspection Officer, which may result in additional scheduling and cost impact.

There are many other smaller differences between U.S.-flag and foreign-flag regulation but, cumulatively, they are costly as well. We estimate that, after initial building differentials, the cost of regulations burdening only U.S.-flag registry are in a range of over \$100,000 per vessel per year, even if one assumes that the annualized cost of drydock rather than underwater hull inspections is "only" \$50,000 per year rather than an upper range of \$100,000 per year.

Let us consider what this means for companies such as ours, which use U.S.-flag vessels in extensive international services. These services must be available with great frequency, requiring large numbers of vessels. The fleet services we offer

compete with services of companies featuring large fleets of Asian, European, or other flag vessels.

What can the excessive burden of Coast Guard regulations mean to a fleet operator? For a fleet of 25 U.S.-flag vessels, with a life expectancy of twenty-five years, a 5 percent cost difference in construction of \$100 million dollar vessels, plus \$100,000 per year per vessel, adds up to roughly \$200 million over the fleet's life (not counting interest on these extra outlays) over the cost of running a foreign-flag fleet which the Coast Guard accepts as safe.

Moreover, there are no offsetting benefits from building or maintaining to higher, more costly U.S. standards, such as lower insurance or maintenance costs.

Clearly, these rules seriously disadvantage U.S.-flag carriers which operate in foreign trades even while our ports are open to their foreign-flag competitors which build, maintain and inspect to less costly international standards.

#### **The Carriers' Objective -- Equal Treatment With International Standards for U.S.-Flag Vessels**

Eliminating duplication of regulatory and classification society requirements will not adversely affect the safety of U.S.-flag vessels. It is estimated that roughly two-thirds of all Coast Guard inspections duplicate inspections done by ABS. If the

classification society inspects the same items to the same or greater standards, is it a good use of taxpayer money for the Coast Guard to be duplicating that effort? It is well established that the Coast Guard can recognize ABS standards for vessel construction, as at 46 CFR § 42.11, which recognizes the society's ability to act on behalf of the government in setting vessel Loadlines.

One way to eliminate this unfair inspection burden on U.S.-flag operators would be to change Coast Guard rules to provide that vessels surveyed as required by ABS, and otherwise maintained in class, would be considered as satisfying U.S.-flag inspection requirements. Adoption of this standard is consistent with existing confidence in ABS, as manifested in assignment of Loadlines and other Coast Guard/ABS agreements, reduces unnecessary scheduling, redundant survey costs and Coast Guard fees, eases our administrative burden, and levels the playing field with our international competition.

In those instances where the agency has in place a standard other than an inspection standard which is beyond international norms again, our experience, including our experience operating foreign-flag vessels, tells us that the proper response by the agency would be to either conform the wording of its rules to international norms or to provide that conformance with classification society rules would be an alternate and sufficient means of satisfying regulatory requirements.

Even in those instances where the U.S. Coast Guard believes that one of its standards contributes to the structural or operating safety of a vessel, we do not believe that unilaterally burdening U.S.-flag vessels is appropriate. We believe that the agency should respond by first, bringing its standards for U.S.-flag vessels competing in international commerce into line with international norms. Then it should work to persuade the International Maritime Organization to approve its suggestions for vessels of all flags, not just those flying the U.S. flag, and not apply them unilaterally.

Under that approach there would be a truly level playing field. Similarly situated vessels, operating in the same manner, carrying the same cargoes in and out of the same U.S. ports, would be built, maintained, and operated according to the same, international standards.

Only approximately eighteen percent of total U.S. foreign liner trade moves in U.S.-flag vessels, built and maintained to U.S. Coast Guard standards. If all U.S. import-export cargoes are included, only about four percent are carried in U.S.-flag vessels. We should not pretend that the purpose of Coast Guard standards beyond international norms is to protect the interests of the public in safe transit of our waters when that set of standards applies to vessels moving only eighteen percent of the liner cargo and four percent of all cargo moving in U.S. international waterborne commerce. Assuming that the international norms are safe -- and that is our experience -- the U.S. standards should be promptly changed.

Regulatory Reform Initiative By APL and Sea-Land

On March 2, 1992, in response to the Department of Transportation's request for public comment on its implementation of President Bush's initiative to reduce the burden of government regulation, APL and Sea-Land submitted a 72-page list containing approximately 300 vessel design, equipment, maintenance, and operating standards recommended for deletion or revision. That list has been provided to Committee staff and we have a copy with us today for the record. Together, our companies' staff spent hundreds of hours to identify and list in detail four categories of regulations:

- Regulations which are redundant to classification society rules or which require duplicate inspections;
- Requirements in international agreements which should be incorporated by reference rather than implemented through uniquely Americanized rules;
- Restrictive national code requirements which should be deleted; and
- Miscellaneous unnecessary or burdensome regulations which should be eliminated or revised.

We understand that over the past year the Coast Guard, working with ABS, has made significant progress in identifying and evaluating duplicative requirements. However, to the best of our knowledge, 15 months later, all but one of those hundreds of regulations are still on the books and the one change that has been made was in process before our March 2, 1992 filing. None of the others has even been the subject of a proposed rulemaking notice.

#### Government-Industry Regulatory Reform Working Group

True regulatory reform requires effort by both industry and the Government. As we mentioned earlier, very recently there has been movement on the part of the Coast Guard in this area. The Maritime Regulatory Reform Working Group recently established by the U.S. Coast Guard under the leadership of Admiral Henn, its Chief of Marine Safety, Security, and Environmental Protection, now provides a forum for industry participation.

APL and Sea-Land welcome this opportunity to participate and have pledged to work towards implementing needed reforms at the earliest possible date. If the changes recommended by APL and Sea-Land in March, 1992, are fully implemented in the relatively near term, the government will have made significant progress towards eliminating a major portion of the inequitable regulatory burden now borne by U.S.-flag carriers.

In its meeting on June 4th, this Working Group established three subgroups addressing vessel design and construction standards, international agreements, and inspections. While only the first of these has been assigned a target date (to complete its initial work within the next few months) we would hope to see a similarly prompt schedule for action by the other subgroups.

But the problem is that these are, themselves, internal deadlines. We need changed regulations. It is our assessment that roughly 60% of the suggestions made by APL and Sea-Land, concerning roughly 180 of some 300 regulations, are broadly accepted within the Coast Guard. We would hope that the agency would not hold back agreed items while studying other items. We see no reason why the agreed upon items could not be the subject of very prompt action. For example, they could be issued as interim final rules (taking effect upon publication) almost immediately -- perhaps within 4-6 weeks. Some might be resolvable through prompt issuance of NVICs.

And, as to the items not completely in agreement, we also seek prompt action. We are concerned that even agreed changes, much less ones where the Coast Guard believes there is a basis for further discussion, may take years to implement through traditional regulatory channels.



We recognize that we are asking the Coast Guard to change aspects of its approach to maritime regulation. And we realize that it will require effort. But the agency has laid some of the groundwork already and should be able to act promptly.

Moreover, reforms that take years to implement almost certainly will be too late to help what remains of the U.S.-flag foreign trade liner fleet.

Thus, we ask the Administration to ensure that actual relief occurs by the end of this year, perhaps through interim final rules, even as to those items where there is currently less than full agreement.

We would appreciate the Committee's support in advising the Coast Guard that this is a priority task which should be completed within this short time frame. We would also ask the Committee to monitor this situation closely and, if appropriate, consider holding a follow-up hearing later this year to ensure that this issue is being resolved promptly.

### Conclusion

Today, U.S.-flag vessels operate under a set of vessel rules which are more complex and expensive than those governing their foreign-flag counterparts -- without providing any tangible safety benefit. Accordingly, the review and rationalization of

U.S. Coast Guard standards with international standards is a key element of overall regulatory reform for operators of U.S.-flag vessels. Obviously, regulatory reform in that area, by itself, cannot solve all the challenges facing American flag companies operating in the highly competitive foreign trades. The costs imposed by the rules we have discussed today are significant, however, and no overall reform effort would be complete without a Coast Guard regulatory component.

That concludes our statement. Thank you again for the opportunity to appear before you today.

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TESTIMONY

by

Delta Queen Steamboat Company

and the

Passenger Vessel Association

Regarding

Coast Guard Passenger Vessel Construction Standards

Subcommittee on the Coast Guard

Subcommittee on Merchant Marine

U.S. House of Representatives

Washington, D.C.

June 17, 1993

Thank you for the opportunity to testify on what may be the most pressing issue facing the passenger vessel industry today.

My name is Tom Carman. I am Vice President, Marine Operations, for the Delta Queen Steamboat Company in New Orleans. I am testifying today for Delta Queen and also for the Passenger Vessel Association (PVA), of which Delta Queen is member company.

As you know, PVA is a nationwide association of more than 500 companies that own, operate and supply U.S. flag passenger vessels. These include dinner cruise ships, tour and excursion boats, car and passenger ferries, private charter boats, casino gaming vessels, domestic overnight cruise vessels and environmental boats. Member companies of the Association operate more than 1,200 vessels ranging in size from 7 to 4,000 passengers, and together employ several thousand people across the country.

We would like to begin by describing the safety and regulatory environments in which the passenger vessel industry operates today. You will note that we indicate there are two distinct environments:

one safety and the other regulatory. We are not convinced that, today, they always are part of the same universe.

We start with a simple premise: that government regulation of the passenger vessel industry should flow from a demonstrable public safety need, and be appropriate to our business.

With this as a guide, let me review the safety record of our industry. The approximately 350 vessel owning companies of the Passenger Vessel Association carry approximately 100 million passengers annually. We are not aware of any accident, reportable injury or fatality that has occurred because of inadequate government vessel construction standards. Indeed, the government's safety standards, in conjunction with ever-advancing industry construction practices, can take credit for bringing us to a point where we can cite this remarkable and consistent level of safe operation.

These, of course, are not the only things which compel safety considerations. Today's intensely competitive business environment virtually demands that owners put safety at the top of their priority list. Consumers of waterborne experiences expect equipment built and operated to the highest safety standards, and the idea that people assume responsibility for their own safety when they buy a ticket to ride on a boat no longer is supported in practice or in the courts.

That government has a legitimate role in setting construction and operating standards for commercial passenger vessels is an accepted view and, among reputable operators, even welcome. A Coast Guard certificate is our industry's "Good House keeping Seal of Approval", and our owners display them proudly.

Having noted for the record our industry's unblemished safety record, we acknowledge the need to update some of the vessel construction regulations presently in place. The evolution of the domestic passenger vessel industry into new types of ventures, such as gaming and dinner cruises, as well the emergence of larger vessels in the traditional excursion and entertainment trades, has strained the bounds of many existing regulations - regulations drafted decades ago to address the safety concerns known then.

Many of the Coast Guard's passenger vessel and small passenger vessel construction regulations are outdated and do not reflect modern materials, construction practices, public expectations, or the scientific or practical knowledge available today. Many key technical concepts have remained unchanged over the past three to five decades. No technical or engineering standard can remain relevant that long in the face of the evolution - in the face of the revolution - in scientific and engineering knowledge that has taken place over that period of time.

There is no question that change is needed to restore

relevancy to many sections of the Coast Guard's vessel construction regulations.

But regulation should have a purpose.

Many of the regulatory changes that we are seeing today are not driven by either a defined public purpose or a demonstrable safety need. The proposed or adopted rules instead seem to be driven by other forces, such as the Coast Guard's wish to appear credible in international maritime fora, the Coast Guard's concern if its standards are not perceived to be stiff enough, or the Coast Guard's need to be viewed as proactive rather than reactive or inactive.

New policy initiative or regulation often brings a dire, and very public, warning about the need to "improve safety", and comes with the same worn and discredited conclusions of invalidated casualty analyses (the claimed deltas of improvement probably exceed the base, and each documented accident in the Coast Guard's casualty report base has been "saved" by each of any number of rulemakings). Regulations lacking any other justification are sold on the theoretical basis that larger vessels bring escalating risk.

The Coast Guard knows that risk has not increased. The consequences of structural failure potentially may be more severe (but only potentially), because of increased passenger loads, but

risk itself has substantially decreased. Risk has decreased in passenger vessels because of dramatic improvements in construction, materials, operation, personnel licensing requirements, the reliability of mechanical equipment and the availability of a wide range of communications. Fire loads in many new vessels are so low that there is reasonable doubt that fire can build sufficient energy to be self sustaining or to spread.

In short, the larger vessels used to justify many of the new regulations we are seeing generally are far more damage resistant, self sustaining vessels than those that came before them. Moreover, more and more small passenger vessels are built to the stiffer passenger vessel criteria.

In those instances where our industry has been able to make a case for change based on need, improved technology or better safety alternatives, we have found the Coast Guard to be a willing and open participant. Even when change is accomplished in this mutually acceptable way, however, there are shortcomings. For example:

- o the change we seek often is promulgated as a "policy alternative" to the regulation at issue (equivalency) rather than a change in the regulation itself. The original regulation remains intact, misleading the uninformed and acting as a stumbling block to additional or future change.



- o the process of defining equivalencies assumes that the condition or problem addressed by a particular regulation has not changed over time, so the Coast Guard accepts substituting one equivalent remedy for another. In fact, the particular threat may have been mitigated or eliminated by some other remedy, and an equivalency is required only to satisfy the continued existence of the original, outdated regulation.
  
- o because the issue of safety benefits is very subjective, our industry often must offer several "upgrades" to achieve relief of a single regulation, policy or practice. Moreover, even when an "upgrade" is accepted, it usually is seen as relief for a particular regulation and cannot be used to win relief from other, similar regulations.

Simple changes that could demonstrably improve safety are often lost in the flurry of new regulatory initiatives. For example, our industry could eliminate many of the documented accidents - passenger trips and falls<sup>1</sup> - by eliminating or sharply

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<sup>1</sup>Passenger trips and falls are 60% of our insurance claims and 40% of our crew claims.

decreasing the height of coamings under watertight and weathertight doors. Our vessels often operate in environments where boarding seas are non-existent. Indeed, operators often cancel trips rather than put passengers in an uncomfortable situation due to inclement weather conditions. Casual water on deck is not a problem; it can be engineered away.

In protected water passenger service doorway coamings are not a benefit but a hazard. And removing such coamings under watertight and weathertight doors on vessels operating in protected environments would save a good portion of the more than one million dollars a year in insurance claims paid for trips and falls. It would also permit "readily achievable" change without "undue burden" so that our industry could better meet the goals of the Americans With Disabilities Act (ADA). We have not been able to accomplish this small change.

#### BEHIND THE REGULATIONS

We often feel like pawns in the Coast Guard's regulatory crusade and as a consequence, are unnecessarily and inappropriately held to deep draft, blue water, international standards.

The source of regulatory concepts is often an international

standard arising from the deliberations of the International Maritime Organization (IMO) wrestling with deep draft vessels in hostile ocean environments and seeking a common denominator that serves the purposes of all of the flag and port states of the trading world.

The filter of the Administrative Procedures Act (APA) is inadequate to achieve the domestication of international ideas or provide adequate thresholds for testing the appropriateness, cost effectiveness or need for candidate regulations in the face of the Coast Guard determination to regulate.

In a letter concerning the adoption of international standards for a domestic passenger operation, a senior Coast Guard policy maker wrote, "My secondary concern deals with how the U.S. is viewed at international fora in the area of commercial vessel safety. The United States has taken a strong position in supporting passage of these amendments at the International Maritime Organization (IMO). As a world leader in the area of maritime safety, it is important that we take an equally strong position domestically. Failure to do so could cause other governments to view our proposals with skepticism, especially since the passenger ship amendments to SOLAS tend to affect significantly more vessels of foreign registry than U.S. flagged vessels."

When the U.S. was a flag state, the Coast Guard persuaded the

IMO to adopt several "urgently needed" Conventions, which then were promptly pigeon-holed by this country -- in some cases for more than a decade. U.S. credibility was questioned. Now that we are, in practice, a port state, we seem to adopt IMO standards as domestic regulation merely to show our commitment to the process and to maintain our credibility with the flag state participants.

Another reason we get wrapped up in international standards is because the people the Coast Guard designates to participate in IMO deliberations and working groups usually are the very same people who have responsibility for domestic policy development and implementation at home. It's easy for these representatives to bring home an IMO package, convince the Coast Guard community it has universal applicability, make minimal efforts to comply with domestic rulemaking requirements, and promulgate the package as regulation. The official appears proactive, aware and involved, even in the complete absence of any documented case for new regulation in the domestic environment.

The IMO currently drives the Coast Guard's marine safety agenda and consumes much of its energy and attention. It perhaps is not surprising, therefore, that the needs and requirements of domestic American companies are confused with those of international trade. But it is a confusion that cannot stand.

The Coast Guard also points to Congress as the reason for its

regulatory zeal. WORKBOAT Magazine quoted one Coast Guard officer as saying that if the parties responsible for the promulgation of regulations pertaining to safety and pollution "don't get the job done", then the rules will be mandated by Congress. Another Coast Guard policymaker was quoted as saying "We want to demonstrate to Congress that we can be trusted with the safety of our passengers."

To read the article one might conclude that the real (not stated) goal of the government is regulation not public safety, and we find this of great concern. There is no reference to consideration of need, applicability, alternatives to regulation, or the ability of industry to survive regulation for regulation's sake. The article highlights the lack of communication and understanding between our industry and the Coast Guard on this issue.

#### RECENT REGULATORY AND POLICY INTERACTIONS

The Operating and Stability Regulations published in the September 11, 1992 issue of the Federal Register are an example of regulations that, in our view, are wholly unjustified and will cause enormous problems in our industry.

On February 13, 1990, the Coast Guard published in the Federal Register its Stability Design and Operational Regulations, Proposed Rule. The proposed rule's intent was to "amend the stability design and operational regulations for inspected vessels to incorporate requirements of the recently adopted amendments to the

Safety of Life at Sea Convention of 1974 (SOLAS)". Although there is no requirement to incorporate SOLAS standards into domestic vessel regulations, and in spite of the fact that it often is not appropriate to do so (particularly when such standards, drafted for international carriers, are imposed upon small domestic use passenger vessels), the rulemaking said, "the U.S. is obligated to enforce the requirements of SOLAS and its amendments."

The changes in SOLAS which these U.S. regulations aim to reflect resulted primarily from the capsizing of the HERALD OF FREE ENTERPRISE in the English Channel in 1987. This cross channel ferry, which was ballasted down by the bow for loading, got underway with her head down, bow loading doors open. She shipped water through her open vehicle deck doors, flooding the vehicle deck and down flooding other low spaces, and capsized. This incident, which should have resulted in criminal prosecution for violation of the laws of physics and common sense, has instead led to domestic construction regulations which could prevent the construction of many types of vessels for our domestic service.

Vessel designs like those of the NATCHEZ, COTTON BLOSSOM, CREOLE QUEEN, other tour boats on the New Orleans waterfront, and the recently authorized riverboat casinos in Louisiana, all will be deemed in violation of these regulations. CHICAGO'S FIRST LADY and other similar charter party boats in Chicago could not be built.

Future vessels for the excursion, pedestrian ferry and party fishing boat businesses of Tidewater Virginia are in jeopardy. Excursion and marine mammal watching vessels employed from Maine to the Carolinas are affected.

Indeed, there are few vessels operated by the domestic passenger vessel industry that will be unaffected by increased cost or radical change in design. In some cases, future editions of tried and true designs will be prohibited outright.

The proposed rules include a requirement for periodic five year deadweight surveys for most vessels, a new damaged stability standard for passenger vessels, a requirement that draft marks be placed on some presently unmarked vessels, and include some operating requirements which "are already a part of good seamanship practice".

The Passenger Vessel Association, then NAPVO, strongly opposed the deadweight survey as over regulation. Further, since original stability curves and calculations no longer existed for some of our older boats, the cost of recreating such data far exceeded the Coast Guard's estimate of costs versus speculative benefit (most of the cost fell mainly on our smaller operators). We also pointed out that in an earlier Coast Guard proposed rulemaking, where the entire small passenger vessel fleet was analyzed over a period of several years, stability was not considered a problem.

We did not respond specifically to the damaged stability criteria, in part because we did not have the wherewithal to actually test vessel designs under the proposed criteria (and as a consequence, did not realize its disastrous implications until naval architects were required to incorporate the damaged stability criteria into their new designs) and also because we felt we had demonstrated sufficiently that the proposal was so flawed under the requirements of the Administrative Procedures Act that withdrawal was required. Specifically, we said, "A new and more objective analysis with a less sweeping approach ... may justify revisiting this issue in the future. In the meantime, the proposed rulemaking has not been justified or properly quantified for the domestic passenger vessel industry...."

On September 11, 1992, the Coast Guard published a final rule which adopted the proposals for passenger vessels without change.

In its preamble to the rule, the Coast Guard finally and publicly asserted that "Coast Guard has a long term goal to incorporate and apply the various minimum international standards set by the IMO to U.S. vessels thereby ensuring that foreign vessels do not have an unfair economic advantage." Since the domestic passenger fleet does not have foreign competition, but can suffer major damage by costly or unjustified regulation drawn from international regimes, it is hard to imagine what the Coast Guard possibly could be thinking of.



In reviewing the final regulatory impact analysis, we found that the Coast Guard's own data, which omitted some obvious costs and included benefits that we don't believe exist, showed that the deadweight survey alone would cost four dollars for every dollar of benefit. The residual stability requirement showed a minimal cost of \$492,000 per year but no benefits were identified. Because of the absence of any actual data to address "preventable loss", the economic analysis reverted to the rhetoric of fear.

Our vehement protests to the Coast Guard subsequent to publication of the final rule notice succeeded in delaying the implementation of the deadweight survey regulation. On December 10, 1992, the original effective date of the regulation, the Coast Guard published a notice of its intention to indefinitely delay this regulation pending completion of another comment period.

We have not been similarly successful on the damaged or residual stability regulation. We frankly did not anticipate that this single regulation would make many traditional and widely-used passenger vessel designs irrelevant for future use. Its true impact was not recognized until naval architects tried to comply in new design projects. Since the impact has become known, architects, builders, buyers and others have tried to get the regulation delayed pending further consideration. To date, however, the Coast Guard only has offered a vague commitment to work out some equivalency on future plan approvals and eventually

publish some equivalency guidance.

This is not satisfactory. Businessmen and women are reluctant to enter into million dollar contracts for vessels which defy existing regulation in the hope that the Coast Guard will agree to waive or accept alternative arrangements at some unspecified point in the future. More so when we believe the regulation is without basis in fact.

The situation remains unresolved. Vessels that were unwittingly started after the effective date and, therefore, cannot comply with the regulation are under construction in several Louisiana shipyards. Several contracts remain unsigned because the tried and true stock design no longer can be used. Some vessels may never be built because the regulation interferes with their intended use.

We believe that the damaged stability regulations should be immediately withdrawn pending a public hearing on the matter. The Coast Guard's own regulatory analysis, which rationalized the fact that existing vessels do not comply with this rigorous standard, stated, "The fact that existing domestic passenger vessels would not be in compliance with the damaged stability regulations should not pose any appreciable threat to safety."

An effort to lift the limitation on the length of the main

vertical zone is proceeding in a different environment. Large riverboat casino and dinner boat operators have a strong interest in building vessels with public spaces longer than 131 feet, the limitation on main vertical zone (MVZ) length permitted in the structural fire protection regulations. Casino and dinner theater boats need open areas to facilitate their use. Casino boats need open spaces for the creation of an exciting atmosphere as well as security surveillance, while theater boats need them for visibility and audience involvement.

The riverboat casino industry, as part of some early riverboat casino design work, researched the origin and concept of dividing a vessel into zones with structural fire barriers no more than 131 feet apart. Because of that research, which showed the origin of the zone length as a function of watertight subdivision arising from the TITANIC sinking, we have been able to make a strong case for change. The original structural fire protection decisions were driven by as much by lack of knowledge of how fire spreads, a lack of control over the quantity of flammables, and a lack of adequate fire fighting equipment, as anything else. The Coast Guard has responded to that research and the concept of change in a positive fashion.

On April 1, 1992, the Coast Guard published a notice requesting comments from the public on proposed changes to several provisions of the structural fire protection regulations. Comments

were almost universally favorable. A Coast Guard representative subsequently met with our industry in Cincinnati in October to propose a possible ranking scheme adapted from an NFPA guide. The dialogue was fresh and invigorating. We were left with the task of trying to fit values based on our subjective and collective judgement into the outlined ranking/rating process. We were frustrated by the lack of contemporary research on shipboard fire, but we completed our work.

In January 1993, the Coast Guard briefed the Passenger Vessel Association on another approach to establishing equivalencies for some relaxation of the MVZ's length limitation. Again we were energized by the mutual understanding and the prospect of change.

In May 1993, the result of this joint Coast Guard and industry effort was unveiled. Without question, both the draft regulation, and the cooperative dialogue through which it was derived, are seen as a positive accomplishment by everyone. Yet all participants were frustrated by a process which sought to improve or make equivalent substitutions in a universe where there is no quantification of the base. Perhaps because we are dealing with such subjective questions of just what are equivalent provisions, many in our industry felt the Coast Guard made unreasonable demands in return for some flexibility in the MVZ.

We do know the character of shipboard fire has changed. At

the moment, neither the Coast Guard or our industry can articulate or quantify the character of that change. With fewer combustibles, fire is less likely. But with newer materials, smoke generation may be worse. Containment of flame but evacuation of smoke may be the control standard of the future. On the other hand, based on shore-based data on the fire suppression capability of fast response sprinklers, we may eliminate both fire and smoke as a threat altogether.

This need to better define shipboard fire protection requirements offers an opportunity for continued joint industry/government cooperation. With its fire testing history, the Coast Guard could fund and perform full scale tests under its R and D program to see if the fire problem is correctly perceived. Suppliers of candidate material and systems should be interested in participating in full scale fire testing. They could provide information on state of the art equipment performance. Vessel architects and operators, on the other hand, could provide practical experience. We believe that a fundamental part of any regulator's responsibility is to continually invest in the updating of knowledge on problems they seek to control through regulation, and we further believe that industry has a critical supporting role to play in this effort. This is one concrete example of an area where cooperative attention could reap real public benefits.

One final note of concern. The Coast Guard's passenger vessel

and small passenger vessel regulations incorporate the rules of the American Bureau of Shipping for hull construction details and scantlings by reference. In the past, that has meant that naval architects referred to several ABS rule categories such as River Rules, or Rules for Steel Hulled Vessels Under 200 Feet, for guidance. Recently the Bureau has undertaken an effort to propose River Rules for Passenger Vessels. As in the case of the Coast Guard, we are uncertain where this change might take us. ABS is known for its international activities and its blue water expertise, not for its expertise in the domestic passenger vessel industry. Our industry does not have standing on ABS committees. Consequently, we may not be able to influence this change even if it too takes an adverse course.

The rule consolidation being undertaken by ABS could make the rules easier for our industry to use. At the same time, classification has not played a significant role in the domestic passenger vessel industry, nor does there seem to be a need for increasing its presence.

#### FUTURE COURSE

We are what we are today because our industry and the Coast Guard have worked hard and cooperatively in the past to understand the causes of the loss of life and property, and to adopt rules to eliminate them. We both are to be congratulated for our obvious

success.

Where do we go from here? Few question that the regulatory system that has brought us to this point, while basically sound, does need a thorough and impartial review. Some standards that once protected us are now burdens or barriers to improvement. Some standards are benign, having long ago fulfilled their purpose. Other standards were adopted indirectly or in pursuit of some other Coast Guard agenda.

The song of simplification in the regulatory universe is one that falls sweetly on many ears. But if regulatory change, propelled under the guise of regulatory simplification, emerges as a "one size fits all trades", the last healthy segment of the U.S. merchant marine -- the domestic passenger vessel industry -- may be cast on the rocks of extinction.

We, the U.S. domestic passenger vessel industry, must be recognized for what we are. We are a distinct industry, with unique characteristics and unique needs and requirements. We are entitled to be an equal, rather than a subsidiary, consideration in the Coast Guard's regulatory consciousness.

How do we embrace change without turning loose the forces of regulation for regulation's sake? How do we keep change focused and at reasonable cost?

We previously have suggested to the Coast Guard that we jointly develop an agenda for the modernization and improvement of the whole body of regulations governing the domestic passenger vessel industry. Our successful and on-going effort to develop new structural fire protection policies -- an effort we described earlier in the testimony - was an early foray into this area and an example of what can be accomplished through cooperative and mutually respectful consultation. It may be time to bring this process to another level of intensity and formalization.

For example, our industry and the Coast Guard could form a working group to negotiate a domestic Safety Of Life On Passenger Vessels convention. Such a working group could develop a realistic agenda and coordinate our joint labor so it is consistent, focused and efficiently used. Our industry cannot test every regulation when proposed, particularly when a regulation is released with little notice, and has a short comment period. The best we have been able to do is try to find someone who has a relevant project underway and hope they will be willing to devote some time to preparing a meaningful response to the Coast Guard proposal. With an agreed upon and manageable agenda, we think more people would be willing to set aside time to participate in the rule-making process.

We don't presume to know what the Coast Guard priority list might look like, but their Unified Agenda in the April 26, 1993



Federal Register had 22 pages of docketed but uncompleted regulatory projects. Many date back to the mid 1980's and many are of interest to us. Our own priorities would include accessibility improvements; structural fire safety changes such as MVZ's and relaxation of the restrictions on non-metallic materials in hull construction; acceptance of rated commercial materials, decorations and furnishings; and acceptance of UL standards for items like decorative lighting and food preparation equipment and its location of use. Even certain non-construction items, such as some manning statutes, would be candidates for review from our standpoint. Stability and other asymptomatic items would be low on our list.

The Coast Guard, with a professional staff dedicated to a rulemaking package that may take years to finalize, can easily overwhelm any industry's ability to comprehend and formulate responsive positions. This is ever more the case with a industry composed, such as ours is, with so many small companies. We desperately need to bring balance back into the rule-making equation. A working group with a common agenda as we just proposed might be the answer.

Finally, we think that any proposal to incorporate international standards into the body of domestic vessel regulation should start with the presumption that it is not in the national interest. To adopt a domestic regulation based on international

standards, for an industry not in international trade, should be done only after there is a consensus that it is in the industry's and country's interest to do so. Such rule-makings should also comply with the spirit as well as the letter of all other laws applicable to domestic rulemaking, such as the APA and the Regulatory Flexibility Act.

While we believe that, for the near term, the Coast Guard will continue to be the direct regulator of our industry, we believe that eventually the marine safety program must move toward industry execution under government delegation. The escalating cost of government, the rising cost of maintaining a full range of marine specific standards, and an increasing need to capitalize on the breadth and depth of industry expertise and experience will move us in that direction. Teamwork now will build the mutual trust and respect that will be necessary at the launching of any such initiative in the future.

Thank you for the opportunity of addressing your subcommittees today. We would be happy to try to answer any questions you may have.

**Subcommittee on Coast Guard and Navigation  
Subcommittee on Merchant Marine**

**Joint Oversight Hearing on  
USCG Shipbuilding Standards**

June 17, 1993

1334 Longworth House Office Building

Written Testimony of:

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The advent of drilling for oil and mineral deposits on the outer continental shelf of the Gulf of Mexico in the 1950's led to the development of a new class of offshore vessel. This class of vessel first appeared as modified fishing vessels that would carry supplies and products to offshore platforms on the open deck. Later, as drilling moved from the bays and sounds to open water in the Gulf, it became necessary to develop a safer and more stable vessel due to the harsher environment. This new class of vessel was, and still is, known as the "Offshore Supply Vessel."

The creation of this new class of vessel caused somewhat of a problem concerning inspection and certification, as this vessel did not fall under the pure definition of any type of existing vessel, and at best could be classified as "Miscellaneous." However, it was deemed that even the regulations for miscellaneous vessels as spelled out in CFR Subchapter I, Cargo and Miscellaneous Vessels, were not applicable in full to this type vessel, therefore, a new class of vessel was created. This class of vessel is known as the Offshore Supply Vessel, or "OSV." The current parameters that determine an OSV are as follows:

- ♦ Must be between 15 and 500 gross tons;
- ♦ Can carry no more than 12 persons in addition to the crew (PACs) on an international voyage;
- ♦ Can carry no more than 16 persons in addition to the crew (PACs) in U.S. waters;
- ♦ Regularly carries goods, supplies, or equipment in the support of exploration, exploitation, or production of offshore mineral or energy resources.

It should be noted that a specific subchapter of regulations for this type of vessel, new Subchapter L, has been proposed, and should be in effect sometime this year, giving clear definition on the rules and regulations of a vessel of this type.

As noted above, one of the criteria of a vessel being classed as an OSV is that it be less than 500 gross tons. The word "tons" as used in this case is widely misunderstood and misinterpreted. In many cases, this is understood to be the actual weight of the ship, for example, a ship of 439 gross tons weighs 439 tons or 983,360 (439 x 2240) pounds. This is incorrect, as gross tonnage has nothing to do with the weight of a vessel, but is in fact a measure of the internal volume or cargo carrying volume that the vessel has.

In approximately 1423, British law required that imported wine be carried in casks, then called "*tuns*." Each of these casks represented a size that held

approximately 252 gallons or approximately 2240 pounds and 40ft<sup>3</sup>. Therefore, the cargo carrying capacity of a vessel was based on how many "tuns," or casks, of wine that it could carry, and not necessarily the amount of weight. In 1854, the internal volume of the entire British Fleet was calculated by Mr. George Moorsom. This volume was then divided by the old register tonnage of the entire fleet, with the result being 98.22ft<sup>3</sup> per ton. This was rounded off to 100ft<sup>3</sup> for convenience. This method, or one ton equals 100ft<sup>3</sup>, has been carried forward into what we now call net and gross register tonnage, which are measures of **volume**, not weight or Deadweight.

Each country has its own type of tonnage measurement, commonly known as National Register Tonnage. Each country has differing methods of reducing tonnage by what is commonly known as exemptions. For example, U.S. regulatory tonnage allows for all areas above the tonnage deck that are fitted with a tonnage opening (a 4' x 5' non-watertight opening) to be exempt from the gross tonnage of a vessel. The rationale is that this space is open to the weather by means of the non-watertight opening, therefore no cargo would be carried in this space. However, it is perfectly acceptable to put crew, passengers, or any type of accommodations in this area, even though it is not suitable for cargo. Other U.S. tonnage reduction methods are installation of deep frames, or solid bulkheads in tanks below the tonnage deck, and exemption of ballast tanks from the gross tonnage of the vessel. As noted, every country has different tonnage reduction schemes in order to keep the register tonnage of their vessels as low as possible.

An attempt to provide continuity in tonnage measurement was undertaken by the 1969 International Maritime Organization (IMO) Convention from which international tonnage measurement was derived. This is a truer measure of the vessel size and basically eliminated tonnage reduction measures. By 1994, all vessels going on international voyages will be required to have International Tonnage Certificates. For vessels working in domestic waters, National Tonnage Certificates will govern.

Unfortunately, in most cases, regulations and their applicability to vessels are based on the gross tonnage of the vessel, not the size or deadweight capacity. For this reason, it has always been to the advantage of the operators to keep the tonnage as low as possible in order to keep from having to meet elevated regulations. This has prompted the designers to consider primarily the tonnage of the vessel, with survivability and safety of the vessel as a secondary consideration. For example, main watertight subdivision is determined by where the tonnage stations might fall, rather than what would be optimum for subdivision and stability considerations. In my opinion, this concept of design is wrong, however, the regulations as written force designers into utilizing tonnage reduction as the primary design criteria, or the operators are unable to compete in the U.S. marketplace.

As noted, a vessel's tonnage is not a measure of the size or cargo carrying capacity of that vessel, but in fact a measure of how good the designer was in playing the Tonnage "Game." To support this argument, we offer for consideration three (3) vessels designed, built, and owned by this company. Two (2) of the vessels were designed to artificially reduce tonnage, while the third was designed properly, considering safety and efficiency.

**Vessel No. 1 -- M/V Laney Chouest (NASB Hull 130)**

Length	235 feet
Beam	50 feet
Depth to Tonnage Deck	16.5 feet
Draft (approx.)	13 feet
Lightship Weight	1825 long tons
DeadWeight (Cargo Carrying Capacity)	1150 long tons
Displacement at Max. Draft	2975 long tons
National Register Tonnage	<b>485.87 Gross Tons</b>
International Register Tonnage	<b>1297 Gross Tons</b>

**Vessel No. 2 -- M/V Damon Chouest (NASB Hull 132)**

Length	240 feet
Beam	52 feet
Depth to Tonnage Deck	18.5 feet
Draft (approx.)	15.5 feet
Lightship Weight	2250 long tons
DeadWeight (Cargo Carrying Capacity)	1527 long tons
Displacement at Max. Draft	3777 long tons
National Register Tonnage	<b>497 Gross Tons</b>
International Register Tonnage	<b>1557 Gross Tons</b>

**Vessel No. 3 -- M/V Amy Chouest (NASB Hull 141)**

Length	234 feet
Beam	52 feet
Depth to Tonnage Deck	21.75 feet
Draft (approx.)	15 feet
Lightship Weight	1300 long tons
DeadWeight (Cargo Carrying Capacity)	2388 long tons
Displacement at Max. Draft	3688 long tons
National Register Tonnage	<b>1410 Gross Tons</b>
International Register Tonnage	<b>1942 Gross Tons</b>

As is quite obvious from the above comparison, it is evident that there is a significant amount of flexibility in design parameters to reduce the tonnage of vessels. There is very little difference in the maximum draft displacement of any of the hulls described above, yet there are significant differences in the National Register Tonnage for the 3rd hull. As can be seen, the figures for International Tonnages, which are based on the actual volumetric displacement of the hulls, are more closely related.

A significant note to the above table is the comparison of cargo carrying capacity. As can be seen, vessel number 3 has the capacity to carry a larger amount of cargo, while the maximum displacement of the hulls are very similar. This is due to the difference in lightship, or actual physical weight of the vessels, with vessels 1 & 2 being significantly heavier than vessel 3. This weight differential is due to the construction techniques used in the

design of the first two hulls to artificially lower the tonnage. These methods, while effective at reduction of tonnage, lower the life cycle maintainability of the vessel, thereby reducing the level of safety in the later years of service. Additionally, the extra steel weight utilized to reduce the tonnage, is, in effect, permanent ballast that must be carried by the ship at all times. This extra weight reduces the efficiency of the ship, thereby causing additional fuel burn required, thereby producing more toxins into the atmosphere.

In 1990, the decision was made that all Edison Chouest Offshore (ECO) vessels would be designed and built with emphasis on **Safety and Maintainability**, rather than tonnage. The initial vessel designed and fabricated under this policy was ECO hull 139, the R/V Geco Marlin. This vessel is not noted in the above comparison, as it was built for seismic research and designed under Subchapter U. ECO hull 141, and possible future sister ship hull 140, are the first supply configurations that will have been built under this philosophy. In designing and building this class of vessel, the philosophy has been to focus on several primary areas of concern and try to achieve maximum improvements in these key areas. These areas and the goals attained in this class of vessel are discussed following.

### **SAFETY**

- ◆ Increased freeboard to working deck offers a dryer work area;
- ◆ Ability to meet Damage Stability Criteria in addition to the required Intact Stability;
- ◆ Roll stabilization tanks and bilge keels improve ship motions, making work on open deck areas safer in addition to improving crew comfort;
- ◆ Basic design is initially based on optimum subdivision for stability rather than reduced tonnage; and,
- ◆ Placement of engine room and cargo tanks are optimized for safest and most effective trim capability of the vessel allowing larger cargo carrying capacities with reduced trim potential, thereby enhancing the stability of the vessel.

### **RELIABILITY/MAINTAINABILITY**

- ◆ Design and location of components/equipment is based on optimum accessibility to insure proper maintenance procedures for maximum life expectancy of components;
- ◆ Dry bulk tanks have been located in an open and accessible compartment that is, in fact, the auxiliary engine room rather than within a ballast tank as would be done on a vessel that is trying to artificially reduce tonnage. It should be noted that when these tanks are located within ballast tanks, the potential for corrosion is much greater as the level of maintainability and inspection is eliminated. As these tanks are subject to internal pressure at discharge, the potential for tank rupture causing damage and injury is increased in the conventional vessel due to this possible corrosion;

- No "Tonnage Beating" deep frames that cause improper coating, corrosion potential and additional weight are fitted; and,
- No "Tonnage Beating" tonnage openings into the superstructure that cause maintenance problems and corrosion potential are fitted.

As can be seen, ECO has gone to extensive lengths to improve the vessels that they build. Unfortunately, hull 141 may be the only vessel in the U.S. offshore supply business built under this philosophy. As previously noted, an OSV is defined as a vessel of less than 500 gross tons that supports oil exploration and/or supply of said exploration. If the 500 gross ton limit is exceeded, the vessel becomes a miscellaneous vessel that is subject to the full extent of Subchapter I regulations. It makes no difference that the vessel is doing exactly the same job as the vessel under 500 tons in a safer and more efficient manner; the rules are different. The problems that have been encountered with the regulations in trying to get this vessel certificated have been paramount to the extent that, in order to compete with lesser quality vessels that are classed as OSVs, it is felt that the old policy of playing the "tonnage reduction games" must be reverted to again. Strangely, some of the vessels that compete with the ECO improved class of vessel are in fact larger, but the tonnage is less, thereby giving them exemptions from rules enforced for our ship. The tables of vessel comparisons above highlight the potential for these differences. Following are some of the difficulties encountered leading us to consider that all new designs for the U.S. marketplace should be prepared with primary emphasis on tonnage reduction. This design policy will be adhered to unless these difficulties can be resolved in an acceptable manner in a relatively short period of time.

- If a vessel is greater than 500 tons, it must be fitted with an emergency generator. This generator must have its own separate switchboard, separate fuel tank, separate cooling, and must be located in an area that on a normal supply vessel design would be designated for crew berthing, requiring rearrangement of the accommodation spaces. While admittedly this cost is not of paramount proportions, it is still a cost that our vessel must bear while the competition does not. Unfortunately, the oil companies do not look at our vessel as any safer than the larger, less than 500 ton ship without an emergency generator, they only look at day rates, which are determined by the initial cost of the vessel. It is our contention that all vessels, whether OSV or Subchapter I should be required to be fitted with an emergency generator.
- If a vessel is greater than 500 tons, it must meet USCG Vital Systems Automation and Control standards. Quite frankly, ECO has expended quite a large amount of capital to meet these basically undefined requirements. It seems that the document format that is good for the rest of the world is not acceptable to the USCG in these areas. A prime example is the propulsion control system fitted on ECO hulls 137, 139, and 140/141. These propulsion control systems were supplied by Ulstein Marine Electronics a/s of Norway. This company is world renowned for its equipment and, in fact, had similar and identical propulsion control systems fitted on hundreds of ships operating worldwide, ranging from fishing vessels to cruise liners. Consider the Royal Viking Sun, which is fitted with the same type of propulsion controls as the above noted



vessels, carrying many passengers on cruises each day. An identical documentation package for this ship that was approved by Det Norske Veritas (DNV) would not be acceptable to the USCG. Hard to believe, but this is a fact, as the documentation package submitted to USCG for the above hulls was identical in scope to that supplied by Ulstein for the Royal Viking Sun, however, this package was rejected by the USCG as "unfit for review." For our hull 139, the rejection of the initial submission of the propulsion control package delayed USCG plan review, resulting in the vessel being delivered to the client approximately ten (10) days late. This delay in delivery of the vessel resulted in lost revenue for my company of approximately **\$120,000.00**. When this loss is compared to the budget of the Coast Guard it is inconsequential, but to a small business trying to make a profit in a very bad economic situation, it is catastrophic. I might add that the final result of this issue was the changing of flag for the Geco Marlin from U.S. to foreign. This is not something that ECO desired, but essentially had to do to compete in the world market. In this case, everyone lost except the foreign flag administration. I understand that there is an effort to more fully define the regulations in these areas, an effort by the USCG that we applaud. This needs to be accomplished very quickly so that problems such as the above mentioned do not happen in the future.

- ♦ All equipment going onboard the vessel must meet the International Maritime Organization's (IMO) Safety of Life at Sea (SOLAS) as well as USCG requirements. It would seem that a SOLAS approved piece of equipment would be acceptable to the USCG, as the U.S. is a signatory to the SOLAS convention, but this is not the case. Considerable amounts of investment capital have been expended by ECO to make certain items of equipment that were in full compliance with SOLAS acceptable to the USCG. A prime example of this occurred on ECO hull 137, a 308' ice capable research ship on charter to the National Science Foundation. ECO worked with our local USCG inspector to select a suitable rescue boat for this vessel. It was stated to ECO that a SOLAS approved boat would be acceptable and, in fact, the local inspector reviewed the proposed rescue boat and gave his verbal approval as to its acceptability. However, during the late stages of this contract, it was brought to our attention that the rescue boat, along with its davit, must be approved by the USCG in addition to SOLAS. In order to meet this requirement, it was necessary to send a USCG inspector to Norway to witness and approve the rebuilding of an already completed davit and boat. The cost of this additional davit, boat, and testing is to our account, and only adds to the cost of the initial build of the ship, thereby making it harder to compete in the marketplace of today. I might add that this davit and boat were identical to over 300 already built and fitted on non-U.S. flag ships in full compliance with SOLAS and their flag administration. Most of these ships are vessels built and owned by renowned seafaring countries such as Norway, the Netherlands, Germany and Great Britain. Fault here does not necessarily lie with the USCG, as they are only doing their jobs in enforcing the regulations. Fault here lies with the regulations. If the SOLAS Convention, which defines minimum safety requirements for vessels at sea, was not good enough for the U.S., it seems that the U.S. should not have signed the convention, or is it possible that all non-U.S. flag ships are unsafe with respect to lifesaving? This scenario is quite hard to believe. It does seem, however, that an international standard

should be just that, international, and internationally accepted by all parties that signed the document creating the standards. While this problem does not hamper the ability of a vessel to operate in domestic waters, as SOLAS is not required for domestic operations, it does impact competition worldwide. Very few, if any, of the other flag administration vessels have to meet such rigid requirements, thereby giving them a distinct advantage over U.S. constructed and U.S. flag vessels.

- ♦ In the supply of an offshore drill site, it is necessary for the supply vessel to carry and pump to the platform quantities of drill water. This is fresh water that is normally carried in ballast tanks, due to limited tankage within the ship. This means that, by strict interpretation, the ballast tanks within the vessel are not being used exclusively for ballast, but are in fact carrying a liquid for delivery to the platform, thereby rendering these tanks as non-exempt from the ship's tonnage. OSVs, however, are specifically exempted from this requirement. In the case of the ECO new design vessel, which is subject to Subchapter I regulations rather than those of an OSV, the fitting of a deck discharge for drill water is not permitted. This, in essence, renders the vessel as being incapable of performing its required mission.
- ♦ If a vessel exceeds 500 gross tons and cannot be considered an OSV, it is subject to the requirements of the Oil Pollution Act of 1990 (OPA-90). In essence, this ship, even though doing no different a job than its counterpart with less tonnage, is locked at under OPA-90 as a tanker. Essentially, this means that all tanks that contain a hydrocarbon based product that the ship is being paid to carry must be double skinned. First, let me state that our company has no problem with the intent of OPA-90, which is to protect the environment from oil spills by very large tank ships, as was the case with the Exxon Valdez spill in Prince William Sound. In fact, ECO is in agreement with the policy. However, when this policy is applied to vessels such as ECO's hull 140/141, we do have problems. In essence, certain tanks that are designated to carry a water based liquid mud product, which normally contains 0% hydrocarbons, but in some cases may contain up to 5% diesel, must be protected with a double skin. Additionally, no hydrocarbons may be carried against the shell within this "cargo block." In essence, what the regulation forces us to do is to protect with a double skin a "cargo block" that in the worst case will have less than 5000 gallons of diesel mixed with 100,000 gallons of mud, but just forward and aft of this cargo block, diesel fuel for the ship's engines may be placed directly against the shell. Effectively, we have protected an area that in worst case has 5% diesel (5000 gal. approx.), but are not required to protect other areas that have 100% diesel (195,000 gal. approx.). Further, the maximum amount of diesel fuel on our vessel is less than 200,000 gallons, while the ship's fuel for a large tanker, which is exempted by OPA-90, may be several million gallons. Additionally, the exempted ship's fuel would most likely be either crude or heavy oil, rather than the diesel, or light oil that is used for ship's fuel in our new designed vessel. Obviously, OPA-90 was meant for large tank ships that carry large quantities of crude oil or other heavy petroleum products. This position is further strengthened by the issuance of Navigation Underway; Tankers, Final Rule, in the May 10, 1993 Federal Register. In essence, these regulations have to do with the operation of an autopilot when a tanker is operating in restricted waters.

This regulation, while not dealing with the physical construction of the ship, was issued by the OPA-90 staff, and can therefore be considered to be required exclusively for vessels falling under OPA-90. It should be noted that in the incidence of this regulation, the rule enforcement is at 1600 gross tons. Additionally, a tanker is defined as "a self-propelled tank vessel, including integrated tug barge combinations, constructed or adapted primarily to carry oil or hazardous material in bulk in the cargo spaces and inspected and certificated as a tanker." Additionally, words such as "Coast Guard does not wish to impose an undue burden on operators of small tankers," and "USCG Captain of the Ports (COTPs) will consider deviations from the rules on a case by case basis," appear in this regulation. The higher tonnage limit of 1600 gross tons and/or specific exemptions allowed only reinforce the fact that these regulations were not meant to cover a vessel such as ECO now wishes to produce. As a further note, an offshore supply vessel, when carrying liquid cargo, will load this cargo on at a shoreside facility then transport it to an offshore facility for use. As required by regulation, both of these facilities must have a Spill Response Plan. These plans cover the vessel used to transport the product from facility to facility. Unfortunately, due to the tonnage limiting definition of an OSV at 500 tons, ECO's new and improved vessel falls under the requirements of OPA-90, and must meet the regulations, no matter how ridiculous, when related to this type of vessel. This only adds to the cost of the vessel initially and throughout its life, and makes it harder for the vessel to compete in the current marketplace.

While it is not necessarily the concern of the USCG as to cost impacts for the requirements initiated by the regulations and their ultimate impact on the vessel's ability to compete in the marketplace, I might refer to Volume II, Chapter 1, C. 3. of the USCG Marine Safety Manual, where it is stated, (highlight added) "The Coast Guard's objective is to administer vessel inspection laws and regulations so as to promote safe, well-equipped vessels that are suitable for their intended service **without placing an unnecessary burden upon the economic and operational needs of the marine industry.** In determining inspection requirements and procedures, inspection personnel must recognize and give due consideration to the following factors:

- a. The burden for proposing acceptable repairs rests on the vessel's owner, not upon the repair facility or the inspector;
- b. Delays to the vessel are costly, and the need for a delay must be balanced against the risks imposed by continued operation of the vessel;
- c. **Certain types of constructions, equipment, and/or repairs are more economically advantageous to the vessel operator and can provide the same measure of safety;**
- d. Some repairs can be safely delayed and can be more economically accomplished at a place and time proposed by the vessel operator;

- e. **The overall safety of a vessel and its operating conditions, such as route, hours of operations, and types of operation, should be considered in determining inspection requirements;**
- f. Vessels are sometimes subject to operational requirements of organizations and agencies other than the Coast Guard; and,
- g. **A balance must be maintained between the requirements of safety and needs for practical operations. Arbitrary decisions or actions that contribute little to the vessel's safety and tend to discourage the construction or operation of the vessels must be avoided."**

Additionally, please note the following statements (highlight added). "It is the Commandant's policy to cooperate with all federal agencies in promoting safety of life and property, and protecting the U.S. environment. While the Coast Guard Marine Safety program objectives are directed toward facilitating safe marine transportation, marine safety personnel **must carefully balance safety and environmental concerns against the economic impact felt by those we regulate, the private marine industry.** As you will experience throughout this course of instruction and your marine safety career, the Coast Guard is dedicated to "facilitating commerce" to the extent that such action will not prejudice safety of life, property and the environment. Marine safety personnel must remain flexible and sensitive to the needs of the marine industry." This statement is a direct quotation from the Introduction of the Initial Indoctrination Lesson Plan Series that each candidate for Marine Inspection must take before becoming a Marine Inspector.

ECO fully agrees with the above statements. ECO, in the development of what is considered to be our next generation of supply vessel, has emphasized safety, which is in full agreement with the Coast Guard's mandate as above stated. However, instead of being rewarded for enhancing the safety of the vessels that we wish to build, we are in fact, severely penalized, even to the point of going back to building less safe vessels, just to be competitive in the marketplace. This is in direct conflict with the Coast Guard's mandate, however, it must be done in order to compete.

It is our contention that enforcing regulations based on a vessel's national register tonnage is incorrect, and enforcement should be based on other means. One option would be to base enforcement and applicability of regulations on the deadweight tonnage of a vessel. It is my feeling that this change over would be quite cumbersome to achieve, and therefore would not be a viable solution.

Another possible option would be to offer vessel specific exemptions from certain regulations with respect to the service requirements of a vessel. This option could create major problems with regards to initial design, as the designer would not necessarily know initially what regulations to design the vessel in conformance with, as he would be unsure what exemptions, if any, could be obtained for the vessel. Individual interpretation might vary from zone to zone, further confusing the issue. It is my feeling that this option, while certainly viable, could potentially create major problems for both the industry and the Coast Guard, therefore it is not recommended.

The most viable option, and the recommendation of ECO, is that steps be made to change the definition of an OSV from that of 500 gross tons to as follows (note that proposed changes to the definition are underlined):

**"An Offshore Supply Vessel (OSV) is defined as follows:**

- ♦ **Must either be between 15 and 500 U.S. Register Gross Tons, or less than 4000 International Gross Tons;**
- ♦ **Should the vessel be designated under the option of International Tonnage, it must be in full compliance with SOLAS requirements;**
- ♦ **Can carry no more than 12 persons in addition to the crew (PACs) on an International Voyage;**
- ♦ **Can carry no more than 16 persons in addition to the crew (PACs) in U.S. waters;**
- ♦ **Regularly carries goods, supplies, or equipment in the support of exploration, exploitation, or production of offshore mineral or energy resources."**

This redefinition of an OSV would allow for an operator to opt for either method of tonnage calculation, i.e., if they should so desire to artificially reduce the tonnage to get their vessel below 500 gross tons to avoid SOLAS implications, they would have the flexibility to do so. Conversely, should the owner desire to build in additional safety measures and consider his investment over the life of the vessel rather than short term, he would have the option to accept the higher international tonnage and still be classified as an OSV, thereby permitting this vessel to compete fairly in the international market.

ECO, in the development of what was considered the "New Generation Supply Vessel," put considerable effort into achieving a vessel that offered the best producability, safety, maintainability and value for each dollar invested. We concluded that the design methods of the past were not the best and attempted to improve upon them. However, we found that by trying to do better, and offer a safer, more reliable vessel, instead of being rewarded for our efforts we were, in fact, penalized. To support the seriousness of this situation, again consider the changing of flag on the Geco Marlin (ECO hull 139) from U.S. to foreign just because of problems like the above. Further note, unless action to eliminate the problems discussed above is taken, our company will probably build no more vessels not subject to the Jones Act that will fly the U.S. flag. This is not because we are non-patriotic, but rather because we must be competitive or we will die as a business. Unfortunately, there are no winners in this situation, as we now employ foreign crews. The U.S. workers that had or would have jobs on this vessel are now unemployed and possibly living off unemployment and welfare services, and the USCG has no vessel to inspect or control. Everyone loses, including the taxpayers!!!!

Necessary steps must be taken to eliminate problems such as the ones noted above. These steps should include as a minimum:

- ♦ The redefinition of an OSV to be more in line with what as offered above so that a higher tonnage, but better designed vessel is still classified within this type;
- ♦ Re-evaluation of USCG policy as to applicability and enforcement of regulations as related to the U.S. merchant fleet; and
- ♦ Universal acceptance of regulations, i.e., should a builder submit data to the USCG in a format approved by another regulatory body, the data in this format should be acceptable for review, thereby not requiring a total redefinition of a data package for format only.

Hopefully, the above dissertation has enlightened you to a very serious problem that confronts the U.S. shipbuilding industry. This problem should be dealt with quickly and effectively. Additionally, please remember that I or any member of my staff is available at any time to meet with you or your committees to further discuss these problems and potential solutions.

Thank you for your time and consideration in this matter.

Regards,  
Edison Chouest Offshore



Gary Rook  
Technical Director

# North American Shipbuilding, Inc.

Hwy. 308, Industrial Park Road  
P. O. Drawer 580, Larose, LA 70373  
Phone No.: (504) 693-4072 FAX (504) 798-7818

June 23, 1993

Letter Reference: DE-2126

Commandant  
United States Coast Guard  
2100 Second Street, S.W.  
Washington, D.C. 20593

Attn. Admiral Henn

Subject: Joint Oversight Hearings on USCG Shipbuilding Standards

Dear Admiral Henn:

Subsequent to testimony presented during the Joint Oversight Hearing on USCG Standards on June 17, 1993 before the Subcommittee on Coast Guard and Navigation and the Subcommittee on Merchant Marine, I feel compelled to clarify certain points. Please note that a copy of this letter is being submitted for inclusion in the record. In response to my testimony regarding the difficulties that my company encountered in the area of Vital Systems Automation for our hull 139, the Geco Marlin, two (2) statements were made that I feel need further clarification. In your testimony, it was stated "The owner has an obligation when he is submitting a vessel for Coast Guard approval to make sure the package is complete and that the information is understandable. The owner opted not to take that responsibility on. That caused the delay. Also, sir, I have to point out, when a company, their staff, tell my staff, we have neither the time nor the money to comply with Coast Guard regulations, the problem starts right there, sir." I would like to

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address both of the above statements independently. Please note the following.

In the case of the Geco Marlin, as is the case with all vessels cited in my testimony, the Propulsion Control System was ordered from a subcontractor. The system ordered was to be in full compliance with all applicable USCG regulations. The shipyard recognizes the desires of the USCG to have all submissions come from a single point of contact, and tries to comply whenever possible. However, in this case, the subcontractor refused to give the shipyard the plans to submit, stating that these plans were proprietary in nature. To have vendors submit proprietary plans is not unusual in this industry, therefore the shipyard did not consider the vendor submission of plans to be a problem. I wish to point out that your staff was made aware of the desires of the subcontractor.

The initial submission of the plans by the subcontractor was returned as "unfit for review." By the time that the data inconsistencies were brought to the shipyard's attention, it was too late to do anything but try to force the subcontractor to provide a submission that was acceptable as quickly as possible. To this end, the shipyard had engineers from the subcontractor fly from Norway to Washington to meet with MSC personnel to rectify the problems. Subsequent to this meeting, the data package was revised and re-submitted to the USCG. Unfortunately at this point, time had elapsed to the point that the vessel was quite close to delivery. The shipyard then began negotiations with our local OCMI with regards to the possibility of the issuance of an 835 so the certificate could be obtained and the vessel delivered on schedule. The OCMI informed us that they had no problem in issuing the certificate with the 835 as long as the MSC called and informed them that "a substantial submission was in hand." I personally requested during a phone conversation with your staff at MSC that they make this call to the OCMI. I received no assurance from this phone conversation that MSC would contact OCMI, in fact I was informed that they would not make the call.



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The following day, myself, along with the Vice-President of my company, met directly with the MSC staff at the MSC office in Washington. We were informed that due to the fact that our package had just arrived, that it "was on the bottom of the pile, and the current backlog is approximately 6 weeks." We were informed that the initial submission was inconsequential to the schedule as it was returned without action. We again explained the urgency of the matter, even to the point of recounting the monies that would be lost by our company if they did not call OCMI, however we received no sympathy from the MSC during this meeting. It was stated by MSC that it was policy that the only way that our submission could be pushed ahead was in the case of a national emergency.

I might call your attention to the USCG Marine Safety Manual, Volume II, Chapter 1, C. 3. b., where it is stated "Delays to the vessel are costly, and the need for delay must be balanced against the risks imposed by continued operation of the vessel." Admittedly, this particular statement is meant for Marine Inspectors, however in good faith you cannot separate Marine Inspection and Plan Review when it comes to fulfilling the USCG's mission.

With regards to the statement that the shipyard does not have the time or money to comply with USCG regulations, I take particular exception. NASB has always prided itself in having a good working relationship with the USCG at all levels, from the Marine Inspectors to the Flag Officers. I have tried to determine where this particular charge may have initiated, and I can think of only one possible source. During a phone conversation with one of the staff members at MSC in regards to the subcontractor submission of data for the Geco Marlin, I made the statement that the shipyard did not have a large engineering staff and did not fully understand the design principals of the subject control system. I further noted that our personal preference was to have the MSC and the subcontractor handle plan review directly, our contention being that a middle man could possibly confuse the issue. In no case did I or anyone at the shipyard state that we did not have time or money to comply with USCG regulations. If this was our policy, I

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doubt seriously that we would have been able to obtain USCG certificates on any of the vessels that we have built in the past. We have regularly obtained certificates without any problems other than the occasional 835 on some vessels.

Please understand that the inclusion of the problems encountered on our hull 139 was not to point fingers or try to place blame on any person or department. I know that all USCG personnel involved were only performing their duty as they perceive it. However, the purpose of the oversight hearing was to discuss problems and procedures that may be present in the USCG interaction with industry, and we were specifically requested by the subcommittee to present in testimony problems such as occurred with hull 139. It is our contention that if the regulations or policy precludes the timely review of plans in circumstances such as occurred on hull 139, that the USCG should re-evaluate this regulation and/or policy to be more in line with the Mission Statement as noted above. In our opinion, USCG personnel should always try to remain open minded and sympathetic to the industry, especially in circumstances when the shipbuilder or owner is at the mercy of a subcontractor. Both industry and the USCG must work together in order to make the system work effectively, and neither should have the attitude that they can control the other. Additionally, we still feel that the regulations in the area of Vital Systems Automation are not nearly definitive enough, leaving too much to the discretion of the designer, especially in the area of format of submission. As in the case of the Geco Marlin, when problems are identified, many times it will be so far along in the build process that delivery may be impacted. It would seem to be a relatively small task for the USCG to prepare and issue a NVIC with respect to Vital Systems Automation that would have a sample format that is acceptable to USCG.

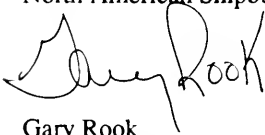
The shipyard agrees that the situation was handled poorly on our part. This fact was admitted to the MSC in our initial meeting on the problem. We were, however, at the mercy of a subcontractor, a fact which we also stated

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to the MSC. I might add that we have taken steps to insure that problems like this do not occur again, as evidenced by the fact that we have just received the Vital Systems Automation Package back approved for NASB hull 137, along with the package for hulls 140/141 requiring a few minor revisions.

Please note that I tried to contact you on Friday, June 18, to discuss the above noted issues, but you were in a meeting. I remain available at any time to discuss these issues further if you should so desire. Thank you again for the opportunity to meet with you during my visit to Washington. Again, I extend the offer to work with your representative in any way possible to resolve the issues discussed during our meeting and at the hearing.

Regards,  
Edison Chouest Offshore  
North American Shipbuilding

A handwritten signature in black ink, appearing to read "Gary Rook". The signature is fluid and cursive, with the first name "Gary" written in a larger, more prominent script than the last name "Rook".

Gary Rook  
Technical Director

cc Mr. Rusty Savoie/Mr. Jim Adams  
Subcommittee on Coast Guard and Navigation



**Shipbuilders  
Council of  
America**

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Tel 703-276-1700 Fax 703-276-1707

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Testimony By

John J. Stocker, President  
Shipbuilders Council of America

Before the

Subcommittee on Merchant Marine  
Subcommittee on Coast Guard and Navigation  
Committee on Merchant Marine and Fisheries  
Regarding  
U.S. Coast Guard Shipbuilding Standards and  
Their Impact on the U.S. Shipbuilding  
Industry's Competitiveness

541 Ford House Office Building  
Washington, DC 20515

June 17, 1993

Mr. Chairman, members of the subcommittees on merchant marine and the Coast Guard, my name is John J. Stocker. I am President of the Shipbuilders Council of America -- the national trade association representing private shipbuilders, ship repairers, marine equipment manufacturers, and naval architects. We very much appreciate the opportunity to testify this morning on the subject of the Coast Guard's shipbuilding standards and their impact on the industry's competitiveness.

In general, the industry believes that there has existed, in the past, differences between the Coast Guard's standards and international standards. While economic analysis and studies differed in their methodology and data, it was clear that the differences added costs to U.S. production, by perhaps as much as 15%.

When we recognized that the future of the industry lay in its ability to respond to international market demand, we became concerned that the differences between the standards that international owners were buying under and those being controlled by the Coast Guard would place us at a competitive disadvantage. Fortunately, the Coast Guard had already initiated contacts with the industry that indicated that they shared our concerns.

As a result, the USCG and the SCA have entered a cooperative program to reduce the premium costs to build U.S. flag ships caused by having to meet Coast Guard rules and regulations. This effort started with the invitation from Admiral Joel Sipes in November of 1990 and continues under his successor, Admiral Gene Henn. The Technical Subcommittee of the Shipbuilders Council of America has been operating closely with the Marine Technology and Hazardous Material Division (G-MTH) Coast Guard Management personnel and with the National Shipbuilding Research Program (NSRP) to accomplish the following:

- Complete the Phase I planning and technical evaluation tasks for a long term program to obtain acceptance of foreign and international marine standards by the Coast Guard. Petro Marine Consultants (PMC) provided the analysis work. During this Phase I effort the Coast Guard assigned an officer to work with NASSCO and PMC as part of their industrial training program.
- The Phase I technical report and program plan was used as the basis for preparing proposals under the NSRP research system. These proposals to do the technical evaluation required in Phase II to obtain USCG acceptance of foreign and international standards were submitted to the NSRP on September 30, 1992. After proposal evaluations were completed, a contract was awarded early in 1993 to

accomplish the engineering work. The winning contractor will work very closely with the Coast Guard to ensure USCG acceptance of the foreign standards.

While we are pleased that the process of specification review is beginning, we are concerned with the effects on the market of two additional items.

The first is the amount of time that may be taken with design review and drawing approvals by the Coast Guard. Because of the problems associated with scarce personnel and fiscal resources, we must have the ability to have a rapid turn-around system established with the Coast Guard field activities or the pre-approval of classes of equipment that may be used on American-built ships.

We have discussed this situation with Admiral Henn and his staff and we feel that there is a strong potential for some of the process problems to be resolved.

A more significant problem has to do with the behavior of equipment suppliers in the marketplace. In several recent quotations for equipment not found in the U.S., American shipyards are finding that foreign suppliers are using the existence of Coast Guard standards as an excuse behind which they charge either higher prices or justify delays in delivery. We suspect that the real difference between Coast Guard and international standards is quite small. But equipment suppliers are using the mere existence of the Coast Guard standards as a further

mechanism to keep us out of the market or are under pressure from foreign shipyards that use those foreign suppliers as a mechanism to add costs to the production of ships in the U.S. Coupled with foreign subsidy practices, it makes the task of improving the competitiveness of U.S. shipyards that much more difficult. For this reason alone, American shipyards may need an American-based marine equipment industry so that we can resist efforts to damage us economically.

For example, the only producers of commercial steam turbine propulsion plants are subsidiaries of Mitsubishi Heavy Industries and Kawasaki Heavy Industries. These propulsion plants are used in the operation of Liquefied Natural Gas Tankers, a market because of its technological complexity and high value added production that is of great interest to American shipyards. The two Japanese companies evenly share worldwide production of commercial steam plants but they are also linked to two shipbuilding companies that are vitally interested in future LNG tanker construction. If an American yard was in competition for those ships, the Japanese steam plant manufacturers would not give the best price and delivery schedule to an American yard because of the economic pressure they may be under from their shipyard colleagues and they would justify the higher price and longer delivery schedule by stating that it was due to the imposition of Coast Guard standards.

Thus, the important feature of the joint Coast Guard/industry effort is that



we can tell the world in a precise way, through the engineering analysis, that there is really very little difference between Coast Guard and international standards. The potential for accessing the full range of available components in the marketplace may continue to be limited in the future, but through our joint efforts we can remove any real or perceived differences in the standards so that the "smoke screen" can never be used again in the future.

Thank you for this opportunity to testify and I am now available to answer any of your questions.



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June 1993

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## Timothy Graul marine design

naval architect & marine engineer

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18 June 1993

Honorable W.J. "Billy" Tauzin, Chairman  
U.S. House of Representatives  
Committee on Merchant Marine and Fisheries  
Coast Guard and Navigation Subcommittee  
Room 541, House Annex II  
Washington, DC 20515

Dear Congressman Tauzin:

We are an established naval architecture firm, actively involved in the design of small passenger vessels since 1981. We, in association with our client and colleague Breaux Brothers Enterprises, shipbuilders of Loreauville, Louisiana, submit this letter as testimony to the subcommittee. We request that it be included in the record of the subcommittee hearing of 17 June 1993, at which Mark Pudlo of this office and Ward Breaux of Breaux Brothers Enterprises were present as observers.

We wish to formally express our concern about the impact on the small passenger vessel industry of the new rules for damaged stability published in Federal Register 11 September 1992 and implemented under 46 CFR 171.080.

Our concerns are as follows:

A. The new rules, which were formulated by the International Maritime Organization (IMO) and intended to enhance the safety of large, deep draft passenger vessels on international voyages, do not have equal merit when applied to smaller vessels (such as those we design), in the 65 to 150 foot range. To our knowledge, very few of the existing and proven small passenger vessels regulated by subchapter T (less than 100 gross tons) can comply with the new requirements as written. In fact, we find these new damaged stability rules to be so strict that all existing regulations for intact stability become trivial in comparison and damaged stability becomes the governing factor around which all vessels longer than 65 feet must be designed.

B. These standards of damaged stability are written to apply to "blue water" vessels venturing far from any shoreside source of

commercial & pleasure craft designs in power and sail

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# Timothy Graul marine design

Honorable W.J. "Billy" Tauzin, Chairman  
U.S. House of Representatives  
18 June 1993  
page two

rescue. As implemented the rules apply to all vessels regardless of whether the route (as designated by the Coast Guard) is exposed, partially protected or protected waters. It makes no sense to apply the same standards of survivability to a dinner boat on the Mississippi as to an ocean-going cruise ship. By contrast, in every other area of regulation, including intact stability, there is a significant difference in severity of regulations between exposed and protected routes.

C. We are aware of no history of evidence in the domestic small passenger vessel fleet to indicate a lack of safety in this regard, and certainly nothing to warrant change on such a radical scale.

D. We are aware of vessels that are already under construction that were started without the parties involved being fully aware of the full impact of these regulations. Some of these will not comply. Admittedly, it is the responsibility of industry to keep abreast of current regulations, but who could have anticipated a rule that would so seriously affect even the best proven and successful craft? In addition, as builders become aware of the regulations, they must hesitate on taking new orders for stock or custom boats (however scarce orders may be) until they can be absolutely sure the vessel can be made to comply. This is an added burden which the industry can hardly withstand.

The impact of these rules is demonstrated by the attached calculations for a vessel built by Breau Brothers Enterprises in 1988. It is not our intention to confuse the issue with naval architectural theory, but we feel that a real life example will put things in perspective. The subject vessel has enough intact stability that we were able to show compliance with intact standards with 150 passengers loaded on the upper deck. In the worst damaged condition, it has more 39 inches of reserve freeboard, a range of positive righting arm of 55 degrees and 30 foot-degrees of righting energy to the angle of maximum arm. In fact, it demonstrates what is virtually the best characteristics of damaged stability of any vessel in our records. Indeed, even in the damaged condition it still complies easily with all requirements for intact stability. Yet when the passenger heeling moment described under 46 CER 171.080(e) (4) (i) is applied it actually falls short of the required righting arm.

# Timothy Graul marine design

Honorable W.J. "Billy" Tauzin, Chairman  
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To us, this clearly indicates that at the Passenger Heeling portion of this rule is much too strict.

Since the above-mentioned concerns have come into the limelight, we have received some positive indications from members of the Coast Guard that the impact on small vessels may indeed warrant some rethinking of this rule, we definitely agree.

With the goal of obtaining necessary relief for the small passenger vessel industry we offer the following for consideration:

- 1) These international regulations should not be applied to domestic passenger vessels. No other international regulations are so applied, not even load line or SOLAS.
- 2) These regulations should in no case apply to vessels less than 79 feet in length. Vessels of this size are not subject to any other international regulations, even when engaged on international voyages.
- 3) If there is legitimate concern that damaged survivability is not sufficiently guaranteed under the old guidelines, when we should derive alternative requirements specifically relevant to small vessels and to the type of service for which they are intended.
- 4) Since the Coast Guard acknowledges that existing vessels do not pose a safety threat, there can be no harm in suspending the standard until a workable solution can be obtained.

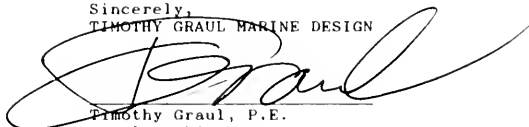
We acknowledge that the Coast Guard has in general been very supportive and willing to discuss these concerns of our firms and of our associates. They have in fact agreed to specially consider calculations demonstrating levels of "equivalent safety" in lieu of strict compliance for specific vessels. This is a step in the right direction, but is completely subject to interpretation. It gives a designer or builder in the contract stage no concrete assurance that he can deliver a vessel with the passenger capacity promised when the final stability analysis is completed just before delivery.

**Timothy Graul marine design**

Honorable W.J. "Billy" Tauzin, Chairman  
U.S. House of Representatives  
18 June 1993  
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We are happy to offer our assistance to the Coast Guard to develop standards that are realistic and attainable.

Sincerely,  
TIMOTHY GRAUL MARINE DESIGN



Timothy Graul, P.E.  
Naval Architect

cc: BREAUX BROTHERS ENTERPRISES, INC.  
PASSENGER VESSEL ASSOCIATION  
U.S.C.G. - MTH-3  
GULF CRAFT, INC.

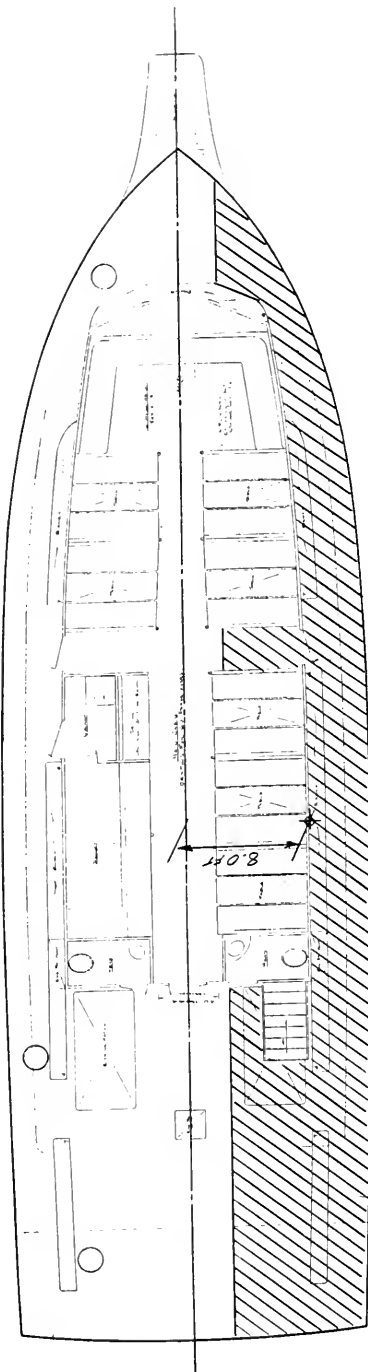


# STABILITY TEST

88 FOOT ALUMINUM PASSENGER VESSEL

Page 1 of 2 pages

REQUIRED MAXIMUM RIGHTING ARM TO 15°  
 BASED ON PASSENGER HEELING MOMENT, AS  
 REQUIRED BY 46 CFR 171.080 (c) (4) (i).



A. EACH PASSENGER WEIGHS 165 LBS

TOTAL PASSENGER WEIGHT =  $(150)(165 \text{ LBS}) = 24,750 \text{ LBS} = 11.05 \text{ LTONS}$

B. PASSENGERS ARE CROWDED INTO AN AREA OF 269 FT²/PASSENGER

TOTAL PASSENGER AREA =  $(150)(269 \text{ FT}^2) = 403.5 \text{ FT}^2$

C. PASSENGERS ARE DISTRIBUTED ON AVAILABLE DECK AREA TOWARD ONE SIDE OF THE VESSEL ON "DECKS WHERE MUSTER STATIONS ARE LOCATED" IN SUCH A WAY THAT THEY PRODUCE THE MOST ADVERSE HEELING MOMENT.

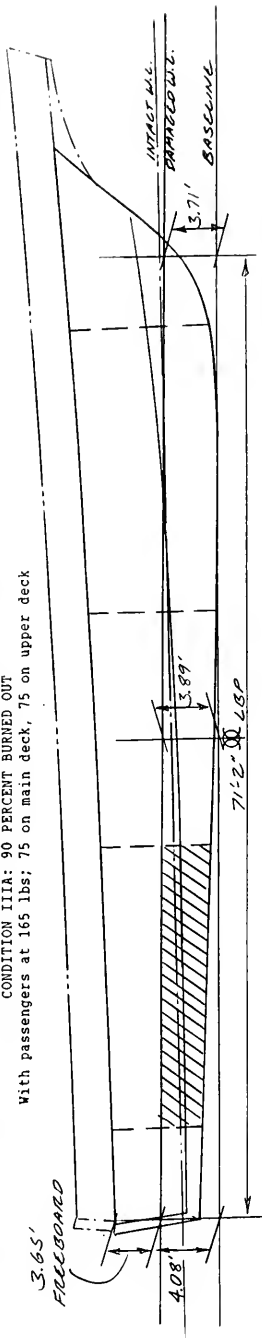
CENTER OF PASSENGER AREA IS 8.0 FEET FROM CENTERLINE.

PASSENGER HEELING MOMENT  
 =  $(11.05 \text{ LTONS})(8.0 \text{ FT})$   
 =  $88.40 \text{ FT-L.T.}$

REQUIRED RIGHTING ARM

=  $\frac{\text{PASSENGER MOMENT}}{\text{DISPLACEMENT}} + 0.13 \text{ FEET}$   
 =  $\frac{88.40 \text{ FT-L.T.}}{50.58 \text{ L.T.}} + 0.13 \text{ FT} = 1.88 \text{ FEET}$

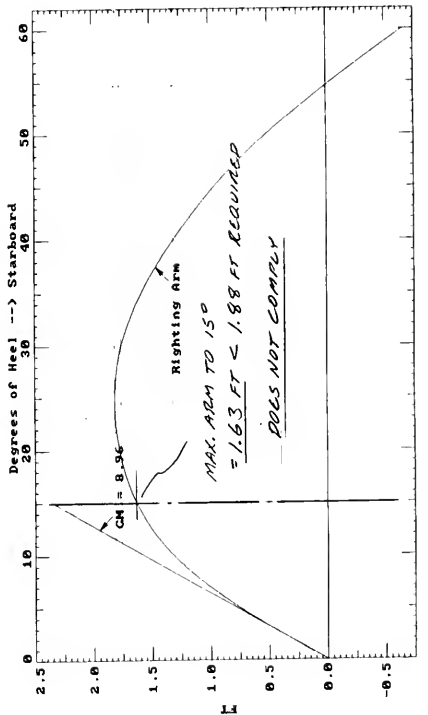
CONDITION IIIA: 90 PERCENT BURNED OUT  
With passengers at 165 lbs; 75 on main deck, 75 on upper deck



DAMAGE TO ENGINE ROOM

RIGHTING ARMS vs HEEL ANGLE WITH DAMAGE

LCG = 1.90a TCG = 0.00 VCG = 10.69



Origin	Depth	Tri--	Heel--	Displacement	Righting Area	Area
3.894	0.30a	0.00	50.58	0.00	0.000	0.00
3.885	0.30a	2.50s	50.58	0.00	0.188s	0.49
3.855	0.33a	5.00s	50.60	0.00	0.754s	1.92
3.797	0.36a	7.50s	50.59	0.00	1.067s	4.20
3.711	0.40a	10.00s	50.59	0.00	1.317s	7.20
3.594	0.42a	12.50s	50.58	0.00	1.502s	10.72
3.450	0.41a	15.00s	50.58	0.00	1.632s	14.64
3.280	0.38a	17.50s	50.58	0.00	1.705s	18.84
3.087	0.34a	20.00s	50.60	0.00	1.776s	23.21
2.870	0.29a	22.50s	50.58	0.00	1.808s	27.70
2.695	0.26a	24.50s	50.58	0.01a	1.815s	31.32
2.637	0.25a	25.00s	50.59	0.00	1.814s	32.23
2.388	0.21a	27.50s	50.59	0.00	1.800s	36.75
2.139	0.18a	30.00s	50.60	0.00	1.758s	41.20
1.861	0.19a	32.50s	50.58	0.00	1.687s	45.51
1.589	0.21a	35.00s	50.58	0.00	1.587s	49.61
1.312	0.21a	37.50s	50.55	0.00	1.461s	53.42
1.036	0.24a	40.00s	50.58	0.00	1.308s	56.88
0.758	0.28a	42.50s	50.58	0.00	1.140s	59.94
0.480	0.32a	45.00s	50.58	0.00	0.959s	62.57
0.199	0.38a	47.50s	50.58	0.00	0.750s	64.71
-0.087	0.47a	50.00s	50.58	0.00	0.513s	66.29
-0.381	0.59a	52.50s	50.58	0.00	0.244s	67.23



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